National Aeronautics and
Space Administration
Ames Research Center
Moffett Field, California 94035

NASA

The Astrogram

VOLUME XXI NUMBER 12

April 5, 1979

Pioneer Venus team and Charles Hall receive National Space Club Awards

The NASA-Ames Research Center Pioneer Venus team and its manager Charles Hall will be honored for outstanding contributions to space science at the National Space Club's Annual Goddard Memorial Dinner on March 30.

The Nelson P. Jackson Award, given to the year's most outstanding contributor to the missile, aircraft, and space field, will be presented to the Pioneer Venus team at the club dinner in Washington, D.C. Named for a founder and past president of the National Space Club, the award will be given jointly to NASA-Ames Research Center for management of Pioneer Venus and to Hughes Aircraft Company, which built the Pioneer Venus Orbiter and Multiprobe.

Hall, who has managed the Pioneer Projects since their inception in 1962, will also be awarded the Annual Astronautics Engineer Award at the Goddard dinner, named for Dr. Robert H. Goddard, builder of the first rocket.

In a further recognition, Hall will address the 74th Annual Explorers Club Dinner in New York City on March 31 describing the Pioneer Venus mission.

The Pioneer Venus Orbiter, which now has circled the planet more than 100 times, entered its orbit of Venus on Dec. 4. Since then it has sent back data and photographs of the cloud-shrouded planet, including radar maps of huge canyons and measurements of lightning storms in the Venus atmosphere and planetary circulation.

The Pioneer Venus Multiprobe split into four probes and a transporter bus in mid-November. The five craft then entered Venus' atmosphere on Dec. 9, sending back extensive data from the top of the atmosphere to the surface of the planet at points spread 6,000 miles apart over Venus' Earth-facing hemisphere. Although not designed to survive impact with the planet, the Day Probe sent back data from the surface for 67 minutes, providing experimenters with a bonus of information about Venus' atmosphere.

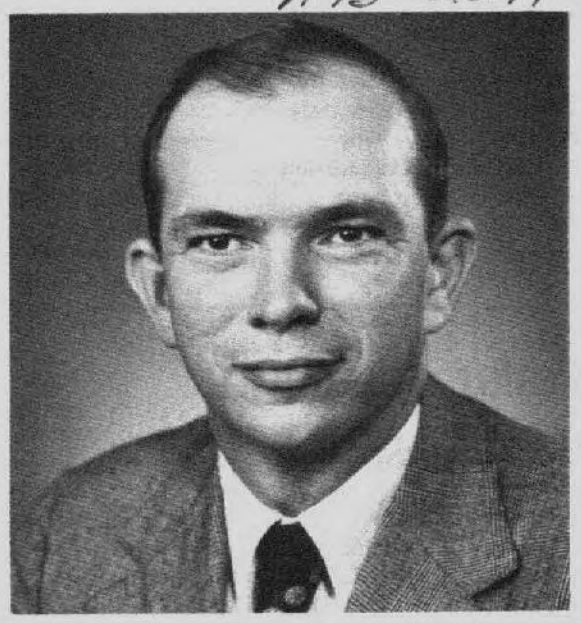
For management of Pioneers 6, 7, 8, and 9 which now are orbiting the Sun, Hall received the NASA Exceptional Service Medal in 1967. The success of the Pioneer 10 and 11 flybys of Jupiter earned Hall the NASA Distinguished Service Medal in 1974. On Sept. 1, Pioneer 11 will become the first spacecraft to fly past and photograph the planet Saturn. Pioneer 10 now is headed out of the solar system. Pioneer 11 also will leave the solar system after its encounter with Saturn.

Born in San Francisco in 1920, Hall joined Ames in 1942 after receiving a bachelor's degree in mechanical engineering from the University of California, Berkeley.

Hall lives with his wife Connie in Los Altos, Calif.

Dallas Denery named 1979/80 Dryden Fellow

A75-2271



Dallas Denery of the Ames Aircraft Guidance and Navigation Branch has been selected by NASA Headquarters under the NASA Executive Development Program's Hugh L. Dryden Memorial Fellowship to attend Stanford University September 1979 through June of 1980. Denery was the candidate ARC nominated to compete for this particular fellowship. Denery has elected to do graduate study in both engineering and management-related subjects.

An Ames employee for the past 13 years, Denery came to NASA from Boeing. He received a Bachelor of Science degree in Aeronautics and Astronautics from the University of Michigan as well as a BSE in Mathematics. He completed his masters work in Aeronautics and Astronautics at the University of Washington in Seattle and obtained a Ph.D. at Stanford in Applied Mechanics when he got to Ames.

Denery is looking forward to the 9-month fellowship experience in graduate study at Stanford and feels that the opportunity parallels his career goals and interests within the NASA system.

The Dryden Memorial Fellowship is sponsored by the National Space Club.

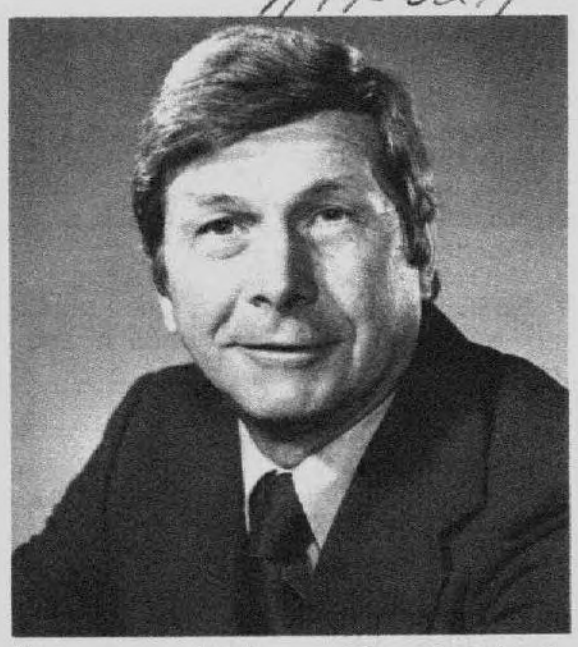
Lloyd Walsh named NCMA Executive Vice-President

Lloyd Walsh, Chief of the Ames Procurement Division, has just been named Executive Vice-President of the National Contract Management Association (NCMA). The Association has over 7,500 members, representing employers of both the public and the private sector. The purpose of NCMA is to assist members in improving their contract management skills through sponsoring and implementing educational programs and contact with knowledgeable persons in the field. In addition, it establishes a uniform code of ethics for those engaged in contract management.

Walsh has been a member of NCMA for nearly 12 years. He has been active with the Northwestern Regional Chapter of NCMA and, in addition to being a NCMA Fellow, is currently Vice-President of the Region which serves the States of California, Hawaii, Oregon, Washington, Idaho, Alaska, and Utah. He was formerly the Director of the Chapter. Ames membership in the North West Region Chapter numbers approximately 25 people.

As the new Executive Vice-President of NCMA, Walsh will increase his duties in the organization and also his contact with individuals on a national basis.

A79-0299



There are normally four annual meetings for the Executive Officers in Washington, D.C., and Walsh expects he will be able to tie his NCMA trip plans with ARC business at Headquarters.

FEW meeting

The South Bay Chapter of Federally Employed Women (FEW) invites all federal (military and civilian) employees (women and men) to its next meeting on Wednesday, April 11, from 5:30 to 7:30 p.m. at Mercury Savings and Loan in the San Antonio Shopping Center in Mountain View. The program is on "Time Management." The speaker will be Ronnie Callahan, President of the South Bay Chapter of FEW. Ronnie has given time management presentations to the supervisory staff at the V.A. Hospital in Palo Alto and to various organizations in the Bay Area.

FEW is an organization promoting equality and equal opportunity for women in government.

Ritchie named NASA Deputy for External Relations

Russell Ritchie has been named NASA Deputy Associate Administrator for External Relations, effective March 11.

In his new post, Ritchie will be working with Arnold W. Frutkin, Associate Administrator for External Relations, in coordinating NASA activities dealing with organizations, news media, Congress and other governmental offices. Frutkin previously held the deputy position.

Ritchie comes to NASA from the Department of Energy (DOE), where he was Special Project Officer to the Undersecretary, specializing in establishing and maintaining effective Congressional, intergovernmental and public relations.

Before DOE was established, he had major administrative and contract management responsibilities with its predecessor organizations – the Energy Research and Development Administration and the Atomic Energy Commission.

From 1960 to 1962, and again from 1965 to 1967, Ritchie served in the U.S. Army Intelligence Corps, including service in Vietnam.

Fuller Memorial Scholarship

Application forms for the Franklyn B. Fuller Memorial Scholarship are now available in the Training Office, mail stop 241-3. The scholarship is a small grant to a student who will be a mathematics major at San Jose State University in 1979-80. The deadline for applications is May 1, 1979, and the recipient will be selected by May 15, 1979.

Dr. Fuller was a highly respected research scientist in fluid dynamics at Ames from 1947 to 1970. Further contributions to the scholarship fund should be sent to Bill Fox, Financial Aid Office, San Jose State University, San Jose, CA 95192.

Ames Employees Welfare club

For information about a modest, quick-response insurance plan for federal employees call:

Jim Deibert, President – ext. 5284
Stan Benbow, Secretary – ext. 5639
Bedford Lampkin, Treasurer – ext. 6039

Golf

The Pleasant Hills Golf Course turned out to be a real walk in the woods for many of the Ames golfers Saturday, March 10. Conrad McCloskey and Jim Silver, who chaired this well-organized tournament, reported that 50 plus players took part.

One player, Owen Koontz, has always moved the ball well here, and this day was no exception – a 74!

Following are the day's results:

First flight: 1 – O. Koontz; 2 – B. Odneal; 3 – A. Petretti and D. Peeler (tie)

Second flight: 1 – A. Llamas and D. Davis (tie); 2 – N. McFadden and W. Ross (tie)

Third flight: 1 – B. Barrow; 2 – J. Levin; 3 – D. Johnson and L. Holzhauser (tie)

NOTE: Spring Valley on April 28.

A U-2 adventure

AC79-0278

The Ames U-2 aircraft recently returned from a trip to Peru. The above photo shows the U-2 being maintenanced at a Peru airport. The two planes behind the U-2 are Russian built aircraft. The following is James Cherbonneaux's (Chief of Ames' High Altitude Missions Branch) accounting of the crew's hectic and strenuous trip to Peru.

NASA U-2 DEPLOYMENT DIARY
LIMA, PERU
February 22–March 9, 1979

Cast of Characters:

Advance Man Peru – Stan Miller – NASA
Advance Man Panama – Bob Danielson – LAC

Crew I
John Arvesen
NASA Deployment Manager Wallops
Elmer Crnkovich – LAC Crew Chief
Ray Parada – LAC
Vernon Andrews – LAC
Jack Kennedy – LAC
Mike Schoals – LAC
Ron Williams – U-2 Pilot Ames to Wallops
Jim Barnes – U-2 Pilot Wallops to Panama

Crew II
John Millard
NASA Deployment Manager Panama
Willie Oakes – LAC Crew Chief
Floyd Whitmill – LAC
Bob Illian – LAC
Vern Hansen – LAC
Walt Prouty – LAC
Bill Wagner – LAC
Ivor Webster – U-2 Pilot Panama to Peru

Crew III
James Cherbonneaux
Overall Deployment Manager
Bob Ericson
LAC U-2 Chief Pilot and Lima Mission Pilot
Jack Wall – LAC Chief U-2 Maintenance
George Plambeck – LAC
Larry Salter – LAC
Austin Haggard – LAC
John Tilley – LAC
Jim Barnes – U-2 Lima Mission Pilot
Ivor Webster – U-2 Lima Mission Pilot

Scientist Lima: Drs. George Smoot and Phil Lubin

Script Summary:

Deploy a U-2 aircraft along with the required ground-support equipment from NASA-Ames to Lima, Peru via NASA-Wallops, Virginia, to Howard A.F.B., Panama and thence to Lima, Peru. While in Lima, the U-2 to be flown on four continuous flights at night to collect heavenly data for the Aether Drift Experiment of Dr. George Smoot of the University of California at Berkeley, Calif. Upon completion of the four flights, the U-2 and its ground-support gear are to be redeployed via the same route back to NASA-Ames.

Date	Time	Events/Comments
2/22		Political approval received from Lima, Peru.
2/23		C-130 support aircraft arrives at Ames and is loaded with U-2 support gear.
2/24		C-130 departs from Ames – aborts to Travis AFB because of engine trouble.
2/25		Advance Men proceed to Panama and Lima.
2/26		Crew I proceeds to Wallops. Crew II proceeds to Panama. Replacement C-130 proceeds to enroute stop in Florida.
2/27	1000	U-2 with Ron Williams (NASA 708) proceeds to Wallops.
	1600	Crew III proceeds to Lima via commercial airline (arrive 1230 Wednesday – 2/28) at Bogota, Columbia. The aircraft that Crew III is awaiting to take to Lima is highjacked on landing at Bogota. The pilot loses control of aircraft and aircraft flies through trees at end of runway before aircraft control is recovered. Crew III decides to take another aircraft to Peru.

2/28 U-2 with Jim Barnes proceeds to Panama from Wallops.

C-130 rescue support aircraft (for overwater leg) delayed and almost aborts mission. Anxious moments, many phones calls – until C-130 rescue gets airborne. Support C-130s (by now two new replacement aircraft) depart Florida for Panama, arriving 2 hours before U-2 recovery time – mad scramble by Crew II to get gear off C-130 in time to recover U-2.

Crew III attempts to make contact with either U.S. embassy personnel (embassy closed for afternoon) or Peruvian personnel (but Peru's government officials work only half days).

3/1 Crew III finds the preshipped minimum U-2 recovery gear and prepares for recovery of U-2 at 1600 LCL – 1 C-130 arrives Lima with one pallet. Naturally, the pallet does not include the equipment for recovering and refueling the U-2.

1000 Contact made with U.S. embassy personnel and Peruvian naval personnel.

1300-1630 Crew II prepares and launches U-2 with Ivor Webster from Panama to Lima.

Crew I returns to NASA-Ames.

3/2 0010-0900 Crew II to Lima via commercial airline.

1000 Crew III on work call.

1130 Second C-130 arrives from Panama.

1145 U-2 moved to commercial airline terminal for press conference.

1200-1300 Peruvian press conference.

1300 U-2 moved back to Peruvian navy area and Crew III begins unloading of C-130.

1400-1600 Crew II arrives at airport and assists Crew III in C-130 unloading and prepares U-2 for night mission.

1815 Crew II to hotel and Crew III launches U-2 with Bob Ericson.

2200 Crew II replaces Crew III for recovery of U-2.

3/3 0030 Crew II recovers U-2.

0200 Crew II to hotel after putting U-2 to bed.

1000-1400 Crew III to airport for final unloading of C-130 pallets.

2000 Crew III back to airport to prepare U-2 for mission. Navy tug is inoperable – have to rent one from Air Peru for launch. Lights out in P.E. area of hangar. New area with air-conditioned room found. In final part of pilot Ivor Webster's suit dressing, controller on suit is not up to par – mad scurry by Cherbonneaux and Ericson to get Webster another suit – from hangar to dressing area (½-mile distance). Webster resuited and U-2 launched with only 5-min delay.

3/4 0600 U-2/Webster recovered – no tug available from Air Peru. After refueling, aircraft towed to hangar, using four-wheel drive vehicle.

0930 Crew III to hotel.

0930-1400 Part of Crew III to airport to rig four-wheel drive vehicle for better towing capability.

1615 Crew II to airport to prepare U-2 for data mission (additional press conference held at U-2 launch site at airport).

1915 U-2 with Jim Barnes launched for data mission.

3/5 0030 U-2 recovered from data mission.

0300 Crew II to hotel.

0500 Crew III to airport to go to Panama via commercial airline. (Cherbonneaux stays in Peru.)

1530 Crew II to airport to prepare U-2 for final data flight.

1835 U-2 with Ericson launched on data flight. Crew I at NASA-Ames launches other U-2 on local NASA-Ames data flight.

3/6 0030 U-2 recovered from Lima data flight.

0230 Crew II to hotel.

0630 Crew II to airport to prepare U-2 for Panama ferry.

1100 U-2 with Barnes launched for Panama after a 1-hr delay for local military exercise.

1800 Crew II to hotel.

0530-2100 Crew I to Wallops from NASA-Ames.

1900 C-130 departs Lima.

2100 C-130 aborts back to Lima due to U-2 equipment leaking fuel near liquid oxygen containers. Many phone calls Lima to NASA-Ames to Panama to Wallops trying to sort out options for launching U-2 from Panama to Wallops. 24-hr delay final option selected.

The President of the United States airplane – Air Force 1 – flights to Mid-East takes ALL rescue support. All concerned decide on one-time emergency waiver for U-2 to fly over water without rescue support.

2200 Crew II to airport to return to NASA/Ames via commercial airline.

3/7 0830 Crew II arrives in San Francisco (all-night flight).

1000 C-130 leaves Peru for Panama.

3/8 0300 Crew III to airport in Panama for U-2 preparation.

0500 U-2 with Ivor Webster launches from Panama to Wallops.

0600 Crew III departs Panama for NASA/Ames via commercial airline.

1300 U-2 with Ron Williams launched from Wallops and recovered at NASA/Ames at 1600 LCL.

3/9 Crew I returns from Wallops.

Spacelab meeting

WHEN: April 11, 1979 (9:00 a.m.)
WHERE: Building 244, room 103
WHO: Terry Grant, Chairman
PURPOSE: A Marshall Space Flight Center representative will explain the SPACELAB command and data handling system.

WHO MAY ATTEND: All interested Ames and contractor personnel.

Please contact Benny Chin, ext. 6530, for details and any questions.

Overall Comments:

The rationale behind the tight schedule in Peru was airline reservation problems – we might have had to stay an extra week or so.

This was an outstanding display of the innovative and inventive nature of all parties concerned, particularly the Lockheed (LAC) personnel who routinely worked 12 to 14 hour shifts without complaints. It was with great pride that all schedules were made with no write-ups on the U-2. There were many people impressed with the "routine" U-2 deployment operations, i.e., the U.S. embassy personnel in Peru, the Peruvian government and press personnel, NASA Headquarters, NASA/Ames, and, of course, the most impressed and grateful was the undersigned.

James W. Cherbonneaux
Chief, High Altitude Missions Branch

Army job openings

The Army is accepting applications, Form 171, from career and career-conditional employees at the Ames Research Center for Supervisory Aerospace Engineer, GS-861-13, and Aerospace Engineer, GS-861-12 and 13. For further information, please call ext. 5267 or 5281, or bring your application to Bldg. 241, Room 131.

"Thank you"

To my friends:

I want to thank all those who attended and also those who contributed in any way to making my retirement dinner an affair I will always remember. The unique X-14B plaque will be cherished along with fond memories of so many great people. The CB radio will get lots of use at our lakeside cabin to call in fishermen and waterskiiers. Thank you all again.

Sincerely,
Frank A. Pauli

To the "Greatest Bunch":

Bert and I still can't get over the super party you gave us!!! When we walked in and saw a "sea of tables," I had to go back out and ask God to help me keep my composure.

Looking at all those "goodies" and the pictures really put a tug into our hearts. The table saw was the final blow! Damn near cried when I saw it!

Now with the table saw and plenty of time, big things are planned for this summer.

We wish it were possible to thank each of you personally.

Bert and Lee Jones

To all my friends at Ames:

Since I wished a quiet separation from Ames, I therefore gave short notice. It became apparent from the many parties and gifts that this wish was not to be the case. I appreciate your thoughts and efforts. Also, I wish to thank all of you for an even greater gift – 31 years of TEAM efforts with great people.

Lew Anderson

To all our friends:

We wish to thank you for the enjoyable luncheon you gave us on "our" retirement. I shall constantly be reminded of our past ventures while casting with my excellent new spinning rod.

John and Dorothy Gawienowski

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
79-59	Administrative Support Clerk	GS-5/6	D	Ames/Army	04-27-79
79-69	Contract Specialist	GS-12/13	ASR	Ames only	04-20-79
79-70	Contract Specialist	GS-11/12	ASA	NASA-Ames & Outside	04-27-79
79-71	Aircraft Mechanic Foreman	WS-10	FOS	NASA/Ames & Army	04-20-79
79-72	AST Technical Management	GS-13/14	LBL	Ames only	04-27-79
79-73	Secretary (Typing)	GS-4/5	DE	Ames/Army	04-27-79
Y-6-79*	Computer Programmer	GS-334-7	Aero Mech Lab	Army, Centerwide, Ames & Outside	04-13-79
Y-7-79*	Electronics Tech (Potential to GS-10)	GS-856-7	Aero Mech Lab	Laboratory-wide, NASA-Ames	04-20-79
Y-7-79*	Mechanical Engineer (Potential to GS-12)	GS-830-11	Aero Mech Lab	* Laboratory-wide, NASA-Ames	04-20-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

***TO APPLY: Complete APM 62 and submit to Mail Stop 241-6.**

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
78-152	Secretary (Typing)	LX	Mary Jeffers
79-45	Secretary (Typing)	RFR	Juanita Fisk
79-50	Secretary (Typing)	RSM	Hilda Hennessee
79-53	Voucher Examiner	AFP	Iry Johnson (outside candidate)

Want ads

Transportation

VW '70 Bug. Runs and looks good. New clutch and valve job. $1300. 253-7031 evenings.

'77 T-Bird Town Landau, jade green metallic, leather interior, sport pkg, climatic control, new steel belted radials, 24K miles, $5650. 262-7831.

FOR SALE: '75 Ply. Gran Fury, PB/PS, Am/Fm, Custom inter., 35K mi., $3000 or best offer. Call 341-2372 after 5 p.m.

FOR SALE: '64 Rambler wagon, good cond., $900 or best offer. Call 341-2372 after 5 p.m.

FOR SALE: '74 Datsun B210, low mileage, excel. cond., $2200 or best offer. Call 341-2372 after 5 p.m.

Housing

Squaw Valley luxury condo: Furn., 3 br, 2 ba, cpts, pvt entr, carport, fireplace, walk to tram, view. 968-4155 eves.

18' Travel Trailer, $2250. Sleeps 5, eastern built and insulated. Many features, 1979 lic. Must see to appreciate. 245-1759 after 4:30 p.m.

HOUSING is needed for summer college students. If you can help, call Marilyn Garis at ext. 5617.

Housing near Ames needed for student from Cambridge, England, for 3 months this summer. Call 961-5268 after 7 p.m.

SQUAW VALLEY RENTAL – Skiing with no traffic headaches. Fully furnished Condo. Sleeps 5. Adjacent to lifts. Call Ray Savin, 964-2170.

HOUSE WANTED: Do you leave home between July 1979 (flex.) and July 1980? German NRC with small family (non-smoking, references) seeks a place to live. We take care of your home for small amount of rent. Call ext. 6192 or 255-4484.

AVAILABLE middle of June to first of September: 4 bdrm, 2½ bths, living room-dining room comb., large family room, kitchen with separate breakfast room, inside utility room with washer/dryer, fully furnished and equipped, easy to maintain yard, located in southern Los Altos within walking distance of bus line to Ames. Rent: $125/week includes water. Renter pays PG&E (summer avg. $25/mo) and telephone. A $100. security deposit is requested. Phone: (415)969-9639.

Housemate wanted: Room available in 4 br house in Sunnyvale. Pool, carpets, airconditioning, 2-car garage, all appliances, 5 miles from Ames. $155/mo. Call 965-6701 days, or 732-3981 evenings.

Miscellaneous

FOR SALE: Couch, brown tweed, $195; dinette table w/leaf, chrome legs and six padded chairs, $145. All in exc. cond., 252-5596.

FOR SALE – Sofa Bed: $175. Two twin beds (frame, box-spring, mattress, small brass headboard): $250. One green vinyl recliner: $50. Two end-table lamps: $30 each. Two-tier corner table: $25. Call 941-5071.

FOR SALE: Refrigerator, 1950 Coldspot, 13 cu.ft. Cross top freezer, $25. 941-3220.

Beautiful panoramic Easter eggs, "Bobbies Minnie Gourmet Coffee Shop," Sunnyvale/Saratoga Road, Cupertino, or phone 252-5596.

Raft trips, Carson River, Sat.-Sun., June 2-3, cost $55, and S.F. American River, Sat.-Sun., June 16-17, cost $50. To sign up for these or information on other raft trips, call ext. 5970, ask for Al Harris.

FOR SALE: 19" color Quasar II TV, $250. 19" B&W TV, $50. Call 247-6014 after 6 p.m.

MISSING: Personal bike. Women's 26-inch, 3-spd, Phillips, black, with basket and generator lights. Please call and I'll pick up. Miller, ext. 5325.

LOST: One bag of softball equipment belonging to the Ames Intramural Softball League. Please return to the equipment storage area in building 227.

Wanted: Ride to Middlefield and Loma Verde, Palo Alto. Am blind and cannot drive – will pay expenses. Hours flexible, daily commitment not required. Call ext. 5720 or 494-3311.

FOR SALE: Westinghouse electric dryer, $50. 738-4849.

Gas will soon be $1 per gallon. Join an existing carpool of three between Homestead and Hwy 9 in Sunnyvale and Ames; 8 a.m. and 4:30 p.m. Call ext. 5537.

WILL TRADE: two (or four) King Tut exhibit tickets for Friday, June 15, a.m., for two (or four) on some other date. Call Nancy after 5 p.m. 657-7543.

FOR SALE: Maple hutch, solid wood. 48" wide, 5' high. Top section has two open shelves and two silverware drawers. Spacious storage cabinet and large drawer in bottom section. $150. 322-1380.

FOR SALE: Sofa bed, $175; 2 twin beds (frame, box-spring, mattress, small brass headboard) $250; 1 green vinyl recliner, $50; 2 end table lamps, $30 ea.; 2-tier corner table, $25. Call 941-5071.

WANTED: Washing machine and gas dryer. Call David at ext. 5511.

EASTER BUNNIES – 255-6585.

Bed-side commode, $30, very good condition. Black recliner, $50, very good condition. Call 296-8594.

FOOD PREPARATION machine: New – never used. Precision "La Machine," Elite model 390 with all standard attachments, instructions, and warranty. Retail for $98, asking $75. Call 494-7766 (Palo Alto).

PERSIAN CAT: White, has papers, free to good home. Needs loving care. Call 996-0944.

LOST: Cross gold pen and pencil set, in beige leather case. If found please return to Annette, 6510.

The Astrogram

Admin. Mgt. Building, Phone 965-5422

The Astrogram is an official publication of the Ames Research Center, National Aeronautics and Space Administration, Moffett Field, California, and is published bi-weekly in the interest of Ames employees.

Editor . . . . . Meredith Moore
Associate Editor . . . . Marcia Kadota
Reporters . . . . . NASA Employees

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National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035

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CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

PREPARED BY:
VISITS COORDINATOR
965-5546 M.S. 253-1

Apr 16 –
National Federation of Federal Employees (NFFE) monthly meeting
Time: 12:00 – 12:30 p.m.
Location: N-213, room 261

Apr 17 –
Thermo- and Gas-Dynamics Division Seminar
Speaker: Prof. Germund Dahlquist, Royal Institute of Technology, Stockholm, Sweden
Topic: Some properties of linear multi-step and one-leg methods for non-linear initial value problems
Time: 10:00 a.m.
Location: N-233, room 227

Atmospheric Science Seminar Series
Speaker: Dr. Derek Cunnold, Dept. of Meteorology, MIT, Cambridge, MA
Topic: Ozone and temperature relationships in the MIT stratospheric circulation model
Time: 3:00 p.m.
Location: N-245, Auditorium

Apr 18 –
Ames Stamp Club meeting
Time: 11:30 a.m.
Location: N-241, room 113

Apr 19 –
Materials and Physical Sciences Branch Seminar
Speaker: Prof. J. C. Anderson, Imperial College of Science and Technology, London, England
Topic: The sputter deposition of amorphous silicon films
Time: 10:00 a.m.
Location: N-229, room 215

Bible Study for Ames and Navy people
Coordinator: Dr. Dewey Hodges, ext. 5835
Time: 12:00 noon
Location: Bldg. 48, Navy side (Sunday School Building)

April 20 –

Apr 23 –

Apr 24 –

Apr 25 –
Ames Photo Club monthly meeting
Time: 4:45 p.m.
Location: N-245, Auditorium

Secretaries Week Luncheon
Time: 11:30 a.m. – 1:30 p.m.
Location: Bold Knight, Sunnyvale
Price: $5.50
Contact: Fran Jonasson, ext. 5777

Apr 26 –
Bible study for Ames and Navy people
Coordinator: Dr. Dewey Hodges, ext. 5835
Time: 12:00 noon
Location: Bldg. 48, Navy side (Sunday School Building)

Apr 27 –
Educational Seminar on Contract Management and Source Selection
Time: 8:00 a.m. – 4:30 p.m.
Location: N-201, Main Auditorium
Registration fee is $35.00 for NCMA members and $45.00 for non-members
Contact: Doris Middlebrooks, ext. 5813 for registration

Apr 30 –

May 1 –
Ames Scuba Club monthly meeting
Time: 11:30 – 1:00 p.m.
Location: N-235, Ames Cafeteria private dining room
Dues are $5.00 per year and payable to Ames Scuba Club, c/o C. S. Yem, 213-8. For equipment loan to paid-up members, contact Jim Ladner, ext. 5210 or pager 26-154.

May 2 –
Ames Stamp Club meeting
Time: 7:30 p.m.
Location: N-241, room 237

May 3 –
Bible Study for Ames and Navy people
Coordinator: Dr. Dewey Hodges, Ext. 5835
Time: 12:00 noon
Location: Bldg. 48, Navy side (Sunday School Building)

May 4 –
If you wish to have an event announced on this calendar please notify Linda Mackey, Visits Coordinator, ext. 5546, M/S 253-1. The next calendar will cover the period April 30 – May 18. The deadline is April 10.

WEEKEND ACTIVITIES:

April 28th – ARC Golf Tournament
Spring Valley Golf Course
Time: 11:00 a.m.
Send money to Dave Banducci, M/S 226-3

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

APRIL 10, THRU APRIL 16, 1979

A LA CARTE MENU

TUESDAY
Baked Chicken with Orange Glaze.....
Spaghetti and Meat Balls.....
Choice of One: Whipped Potatoes, Rice Pilaf, Mixed Vegetables, Buttered Hominy or Salad
Soup - Scotch Barley (Lamb & Vegetables).....

WEDNESDAY
Yankee Pot Roast and Potato Pancake.....
Spaghetti and Ravioli.....
Choice of One: Mashed, Country Fried Potatoes, Zucchini & Tomatoes, Mixed Beans or Salad
Soup - Cream of Broccoli.....

THURSDAY
Roast Pork and Dressing, Glazed Apple.....
Beef Paprikash over Noodles.....
Choice of One: Snowflaked Potatoes, Yams, Beans & Mushrooms, Creamed Spinach or Salad
Soup - Chicken Broth and Rice.....

FRIDAY
Shrimp Creole and Rice.....
Zucchini and Beef Casserole.....
Choice of One: Whipped, Baked Potatoes, Green Beans, Cauliflower Au Gratin or Salad
Soup - Fulton's Market Clam Chowder.....

MONDAY
Home Style Meat Loaf.....
Turkey Pot Pie Pastry Crust.....
Choice of One: Snowflaked Potatoes, Rice Pilaf, Butter Peas, Glazed Carrots or Salad
Soup - Fresh Vegetable with Spaghetti.....

DAILY SPECIALS
INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

* * * * * * * * * * * * * * * * * *

APRIL 17, THRU APRIL 23, 1979

A LA CARTE MENU

TUESDAY
Baked Ham and Turkey Surpreme.....
Picadinho Copacabana (Meat Filled Crepe).....
Choice of One: Mashed Potatoes, Yellow Rice, Savory Green Beans, Buttered Carrots or Salad
Soup - Cream of Vegetable.....

WEDNESDAY
Old Fashion Irish Stew and Dumplings.....
Creamed Chip Beef on Cheese Biscuit.....
Choice of one: Snowflaked, Scalloped Potatoes, Au Gratin Sprinach, Beets or Salad
Soup - Tomato Laredo or French Onion.....

THURSDAY
Roast Tom Turkey, Dressing & Cranberry Sauce.....
Macaroni Mexiconi.....
Choice of One: Whipped or Lyonaise Potatoes, Italian Mixed Vegetables, Carrots or Salad
Soup - Beef Consomme with Peas and Rice.....

FRIDAY
Potted Swiss Steak.....
Seafood Omelette or Quiche Lorraine.....
Choice of One: Snowflaked Potatoes, Buttered Rice Cauliflower & Cheeder Cheese Sauce, Peas or Salad
Soup - Boston Clam Chowder.....

MONDAY
Roast Sirloin of Beef.....
Swedish Meat Balls & Rice Pilaf.....
Choice of One: Whipped Potatoes, Rice O'Brien, Broccoli Au Gratin, or Corn
Soup - Macaroni, Tomatoe & Onion.....

DAILY SPECIALS
INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

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National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

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NASA

The Astrogram

VOLUME XXI NUMBER 13

April 19, 1979

Dr. Mina Johnson to speak at Secretaries Luncheon April 25

Dr. Mina Johnson will be the featured speaker at the Secretaries Week Luncheon on April 25, 1979. Dr. Johnson is Professor of Business at San Francisco State University, teaching introduction to word processing (from a concepts viewpoint), business communications and report writing, and secretarial/office management subjects. As an adjunct to her teaching, she conducts one- and two-day seminars for secretaries and management personnel. She has lectured nationwide for government, business, educational, managerial, and secretarial groups. As a Danforth Fellow, Dr. Johnson completed her Ph.D. in the College of Business Administration at the University of Iowa, from where her B.S. in Commerce also was awarded. Her Master's Degree is from Indiana University. She authored Chapter 2 of WEBSTER'S SECRETARIAL HANDBOOK, and RECORDS MANAGEMENT, a college text, and shares authorship of several workbooks for office machines.

You won't want to miss hearing this dynamic speaker. Plan to attend the luncheon, Wednesday, April 25, 11:30 a.m. to 1:30 p.m., at the Bold Knight, Sunnyvale.

A79-0252

Busy making plans for the Secretaries Luncheon on April 25 are: Anita Paige, Sue Ann Sue, Emily Neves, Janet Glaab, Uldine Kersten, and Jane Cordell. Other planning committee members include Natalie Bossio, Evelyn Dye, Annie Goodwin, Clara Johnson, Fran Jonasson, Janie Kendrick, Marcia Kadota, Bea Morales, Etta Rosamond, May Rosen, and Lesley Whitaker.

Red Cross thanks donors

The American Red Cross extends a big thank you to the 119 donors who gave blood at the last Blood Mobile March 14, 1979. 135 donors presented themselves and there were 119 successful donations. This was the best mobile in three years.

Bond drive begins May 6

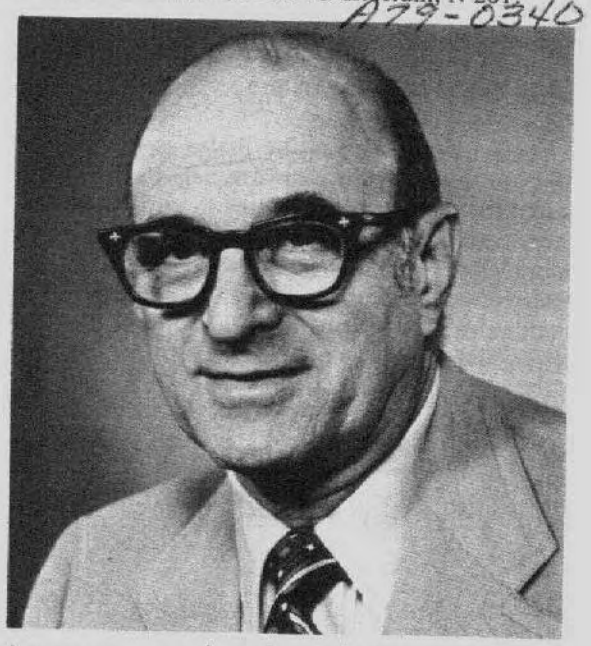
Lionel Levy wins '79 H. Julian Allen Award

The 1979 H. Julian Allen Award will be presented to Mr. Lionel J. Levy, Jr., for his paper entitled "Experimental and Computational Steady and Unsteady Transonic Flows About a Thick Airfoil."

The H. Julian Allen Award was established in 1969 to recognize outstanding scientific and engineering papers authored by members of the Ames Staff. Each year the award is presented along with an honorarium for the paper judged best by the Selection Committee.

The award and the honorarium will be presented to the winner in conjunction with a presentation of the paper to the Center Staff scheduled for April 24, 1979, at 10:30 a.m., in the Auditorium, N-201.

A79-0340



Ames scholarship

Applications are now available for the 1979 Ames Employees Scholarship Program being sponsored by the Ames Exchange Council. Two scholarships in amounts of up to $500 will be awarded to the children of Ames Research Center Federal career employees or retirees or military detailees stationed at Ames. The scholarship will honor students in both the academic and vocational areas and is renewable each year. One scholarship will be awarded in each area.

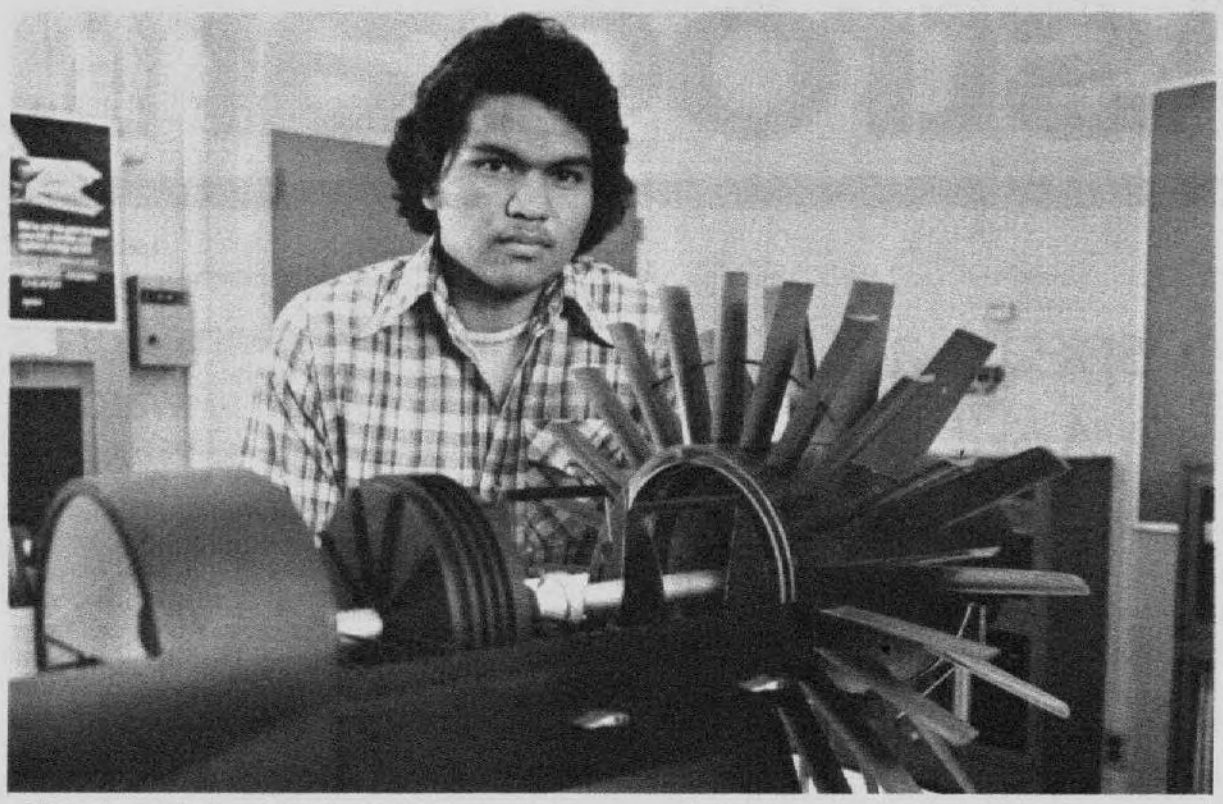
For further information or for applications, contact Marcia Kadota, Mail Stop 241-3, extension 5422.

Vietnam Veterans notice

We have been asked by NASA Headquarters to identify all Vietnam Era Veterans. A Vietnam Era Veteran is anyone who was on active military duty between August 5, 1964 and May 7, 1975, regardless of his or her duty station. If you are a Vietnam Era Veteran or have a question about your eligibility, please call ext. 5610. In addition, the President will soon proclaim May 28–June 3, 1979 as Vietnam Veterans Week.

This applies only to civil service employees.

Work experience student aids in wind tunnel model work



This is a photo of Rudy Cotillon, a work-experience student, working in the Model Shop, and a portion of a one half inch to the foot scale model of one of the new drive units that will move the air in the 40' X 80' and 80' X 120' tunnel when the conversion is completed.

These models are used by design engineers, bidders, and construction people to help them in their work. The models must be made to very close tolerances because an error in this small size would be magnified many times in the real thing. They are made of wood, plastics, glue, and require a lot of work using layout, pattern making, mold making, casting and assembly skills.

Rudy was assigned as the trainee member of the crew assisting Tom Fitzgerald, the project leader on the job. He worked on various parts of the project, doing excellent work and gaining valuable experience in layout, wood turning, mold making and casting plastic.

Rudy is one of 40 people that the Technical Services Division is training under the Foothill Community College District Work Experience Program. Both the students and Ames benefit from the program. Rudy, like many of the present and past students, is a real asset to the program and the work in the shops.

Aerodynamics project results in three papers

For the past three years, the Aerodynamics Division has been involved in a research program on the unsteady aerodynamics of oscillating wings. At the recent AIAA/ASME/ASCE/AHS Structures, Structural Dynamics, and Materials Conference held in St. Louis, MO, three of the nine papers presented in the unsteady aerodynamics session resulted from the division's research program. The first data set from a large-scale oscillating airfoil eperiment in the Ames 11- by 11-Foot Transonic Wind Tunnel was reported in a paper entitled "Experiments in Unsteady Transonic Flow" by Sanford Davis and Gerald Malcolm. Ray Chi, who recently completed two years at Ames under the auspices of the National Research Council's Research Associateship Program, presented a paper on "An Analysis of Unsteady Transonic Flow in Wind Tunnels in the Sub-Resonant Frequency Range." The third paper is based on the research performed under a grant to Princeton University that attempts to correlate the Ames-generated unsteady data with simplified mathematical models. The paper was presented by Mark Williams and is entitled "Unsteady Airloads in Supercritical Transonic Flows."

AIAA contest

An additional source for Delta Dart Kits is Ching-Mao Hung, B202A/R217, ext. 6420.

Awards at the May 20th contest will be trophies through fifth place and ribbons through tenth place in all events for ages 14 years and under. In events for ages 15 through 19, trophies will be awarded through third place.

For free pennyplane plans and additional information concerning the contest, please contact George Xenakis, ext. 5430.

ARA ACTIVITIES

The election of new members to the ARA Executive Board has been completed. The winners are: Armando Lopez, Stan Benbow, Paulette Burgess, Ed Tischler, Jeanne Woods, and Mary Hall. They join the other members on the Board who are: Fred Baker, Betty Hemphill, Bonnie Dalton, Carol Anderson, Ray Sargis, and Joe Rokovich. Congratulations to the new members. Thanks to the outgoing members – Judy Long, who served as president for the last year, and Bobbi Pittman, who provided much help through the past years. Also, thanks to the rest of the people on the ballot who didn't quite get enough votes to win but were willing to be candidates and have the possible opportunity as Board members to offer their help.

The Board elected new officers at their April meeting. They are: President – Stan Benbow; Vice-President, Betty Hemphill; Secretary – Carol Anderson; and Treasurer, Paulette Burgess.

Ski season best ever for Ames club

A79-0324

The 1979 ski season was one of the best ever for the Ames Ski Club. This year, the Club rented condos at Kirkwood Meadows, Alpine Meadows and North Star for three weekend trips. Car-pooling and accommodations right at the ski areas gave skiers more time on the slopes and reduced the cost of transportation. The annual out-of-state trip was to beautiful Sun Valley, Idaho for seven days of sunny uncrowded skiing. Plans are now being made for the 1980 season. Membership in the Ames Ski Club is open to all employees, both federal and contractor. Just send your name, mail stop and extension to Jack Tunnell, MS 200-5.

MBA announcement

The next MBA INFORMATION MEETING is scheduled for Friday, May 4. All employees of ACE member organizations who are interested in learning more about the televised MBA PROGRAM are invited to attend.

The purpose of this INFORMATION MEETING is to explain the objectives of the program and answer questions concerning the requirements for admission and how you can enroll in the course which are scheduled on television.

Remember:

Date – Friday, May 4
Time – 12–1 p.m.
Channel – 8 (Room 193 Skilling Building for those who will be attending on the Stanford campus.)

NASA Travel Accident Insurance

The NASA Travel Accident Insurance policy protects you when you travel – whether it's to and from work, on shopping trips, running crosstown errands, chauffeuring the children to school, vacationing . . . or taking business trips. It is an especially designed low-cost insurance coverage for NASA employees.

Brochures are available in the Training and Special Programs Office (extension 5622). Coverage is effective on May 1, 1979 or date of enrollment.

Mars in 3-D

On May 1, 1979, at 2:00 p.m., Ames Auditorium, Dr. Elliott C. Levinthal, adjunct professor of genetics at Stanford, will present a dramatic movie of Mars in 3-D based on image data taken by the Viking Mission to Mars. Audience will be given special glasses to get the full effect. Subtitled "Images from the Viking Mission," the movie was developed by Dr. Levinthal using advanced computer techniques. It is complete with a stereo sound track of computer-generated music.

Ridges, outcrops and eroded drifts of the Lander One terrain are clearly shown. Closing scenes show the rock types and troughs that surround Lander Two. In the film, canyons the size of the Grand Canyon are shown in full relief while surface features on the ground near the landers are dramatically shown into the foreground. Many background crater rims and rocks are seen as clearly etched topographical features.

Dr. Levinthal produced the film, Kenneth L. Jones, working at the Jet Propulsion Laboratory at the California Institute of Technology directed it, and Uri Geva, a graduate student in the Communications Department at Stanford was film adviser and editor.

Golf

Although 55 players asked to play, Chairmen John Pogue and Don Davis were limited by "Pasatiempo" to only 44 starting times on Saturday, March 31. Those that played enjoyed perfect weather (we have been fortunate this year), nicely trimmed fairways and frictionless, undulating greens.

Never knowing who or how your partner is doing is what this Best Ball-Blind Partner Tourney was about. Those who earned honors were:

First flight: 1 – P. Barisich/J. Lee and D. Norman/B. Odneal tie; 2 – L. Hochstein/N. Martin, W. Anderson/R. Ramos, and R. Eddy/O. Koontz tie (3 way).

Second flight: 1 – C. Eddy/ V. Oyama; 2 – D. Davis/J. Silver, G. Falkenthal/M. Horstman, and J. Weyers/J. Cayot tie (3 way).

Third flight: 1 – G. Rathert/M. Macon (had the combined low net of the day 64); 2 – J. Pogue/A. Joly, F. Weyers/D. Pachuchi, J. Levin/I. Rathert tie (3 way).

The individual low nets for the day were R. Ramos 72, M. Horstman 71, and M. Macon and P. Pachuchi 72's.

Ames industrial league basketball team wins championship

The NASA Ames Research Center industrial league basketball team for the second consecutive year won the City of Sunnyvale, 1978-79 Class C Championship in a playoff game against Advanced Electronics March 5 at Peterson High School. In the opening minutes of the game, the NASA team acquired a 10 to 2 advantage and never relinquished the lead, thus emerging victorious with a 71 to 58 win.

That same NASA team participating in a post-season SANCRA (Sports Association of Northern California Recreation Agencies) Class C tournament was able to defeat teams from Palo Alto, Los Gatos, Mountain View, Los Altos, Cupertino, Milpitas, and Sunnyvale in the single elimination event staged the weekend of February 24. The 3-day event required the NASA team to play two games the last day with 1 hr of rest between them.

During the weekend of March 24, the NASA team participated in the Santa Clara County SANCRA tournament and won the Class C-2 Championship defeating the Sea Cliffers from Santa Cruz 81 to 62.

The City of Sunnyvale and SANCRA tournament victories were rewarded by large team trophies to be placed in the Ames cafeteria trophy case in addition to individual player trophies.

A79-0248-1

The team members consist of: Front row, left to right; Roy Gardner, Dan Kojiro, Ernie Jennings. Back row left to right: Kevin Chargin, Mladen Chargin, Paul Kutler, John Pender, Denny "Ace" Chaussee, and Roger Hedlund.

Cafeteria price increase

And you think you have problems trying to keep yourself in food and drink in the face of soaring prices.

Our Ames Cafeteria's problem is that it must raise prices just to pay for expenditures because of the recent surge in the double-digit inflation rates. Its expected earnings will decline even if the number of patrons increase during the year. The case in point, meat and vegetable suppliers have increased prices on many items to over 25 cents a pound this past year.

Our Ames Cafeteria is committed to keeping its price increases within President Carter's anti-inflation guidelines. We can expect this price increase in the cafeteria gradually starting this month.

AIAA/AHS meeting

The AIAA/ARC Galileo Memorial Scholarship awards will be presented in the Ames cafeteria on Thursday evening, May 3, 1979. The San Francisco Section of the American Institute of Aeronautics and Astronautics and the San Francisco Chapter of the American Helicopter Society are co-sponsors of the meeting, which will feature "The Quiet Airplane – Evolution for Reconnaisance to Research." The speakers will be Mr. F. David Schnebly of Lockheed Missiles and Space Company who managed the design and development of the YO-3A aircraft and Dr. Frederic H. Schmitz of the Army Aeromechanics Laboratory who has applied the aircraft to measurement of helicopter noise.

A no-host social hour will be held in the cafeteria beginning at 6 p.m. with tours to the YO-3A aircraft. A New York steak dinner will be served at 7 p.m. The cost will be $9.50, including tax and tip.

Center Director, Mr. C. A. Syvertson will present the Galileo Scholarship awards at 8 p.m., followed by the program.

For dinner reservations, call John Bull, Ext. 5425, on or before Tuesday, May 1. No reservations are necessary to attend the program only.

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
Amendment to 79-66	Research Aircraft Inspector	WG-14/15	FOI	NASA-wide & outside	Extended to 5-4-79
79-68	Administrative Support Clerk	GS-5/6	D	NASA-Ames/ Army Tenant Organizations	4-27-79
79-72	AST Technical Management	GS-13/14	LBE	Ames employees only	4-27-79
79-73	Secretary (Typing)	GS-4/5	DE	NASA-Ames/ Army/Tenant Organizations	4-27-79
79-74	Supervisory, AST Experimental Facility Techniques	GS-13/14	STF	NASA-Ames & Army	5-4-79
79-75	Secretary (Typing) or Secretary (Steno)	GS-4/5	STA	Centerwide, Army & outside	5-4-79
79-76	Secretary (Typing) or (Steno)	GS-5/6	FS	NASA-Ames/ Army/Tenant Organizations	5-4-79
79-77	Electronic Mechanic	WG-10/11	FOS	NASA-Ames/ Army/Tenant Organizations	5-4-79
79-78	Procurement Clerk (Typing) or Clerk-Typist	GS-4/5 GS-3/4	ASB	Ames/outside	4-27-79
79-79	Model Maker (Machining)	WG-14	RSM	Ames/Army	5-4-79
79-80	Model Maker (Metal)	WG-14	RSS	Ames/Army	5-4-79
79-81	Research Aircraft Mechanic (Crew Chief)	WG-13	FOS	Ames/Army/ Tenant Organizations	5-4-79
Y-8-79	General Engineer	GS-801-12 potential GS-13	Aero-mech Lab Support Div	Laboratory wide, NASA-Ames	5-4-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
79-29	Aerospace Engineer, AST, Stability, Control and Performance	FHI	J. Jinkerson
79-40	Secretary (Typing)	FVR	V. Morouse
79-51	AST, Technical Management	FH	D. Ciffone
79-54	Secretary (Typing)	DOS	A. Balbin (outside candidate)
79-55	Secretary (Typing)	RKG	Elizabeth Eppel
79-60	Personnel Clerk (Typing)/Clerk-Typist	APM	Sandra McConnell (outside candidate)
79-61	Secretary (Typing) or Secretary (Steno)	SEH	Cancelled

Want ads

Transportation

FOR SALE: '69 Camaro, new engine, 15K miles, new carb, new shocks, new muffler. $2200 or best offer. 267-6925 days.

FOR SALE: '64 Falcon wagon, good cond., $900 or best offer. Call 341-2372 after 5 p.m.

'75 Honda GL1000, gold wind full dress, white windjammer and side saddles, air shock, front and rear twin touring seats with back rest, luggage rack, pull back handlebars, cruise control, foot pads, roll bar, drive away kick stand, 16" rear wheel. $2200 or best offer. 378-3143.

FOR SALE: '76 Chevy ½-ton Step-Van, 90% converted, dbl bed, icebox, toilet, etc., 12–15 mpg, exc. cond., $3700 or best offer. 371-4323, days.

FOR SALE: '71 MGB-GT, orange w/black interior, 67K miles, very good cond., $2500 or best offer. 656-1871.

'77 Fiat X19, best mileage sport car, 30 mpg, exc. cond., AM/FM stereo cassette, removable top, $4950. 854-0729 evenings.

FOR SALE: 1968 Pontiac Tempest, V8, AT, PS, AC, AM radio. Good commute car for a student. $400 or offer. 251-1967 evenings.

FOR SALE: '73 Int. Scout II, PS/PB, air cond, low mileage, $3800 or best offer. 4-w/d. 736-7984.

FOR SALE: '75 Ply. Gran Fury, PB/PS, Am/Fm, Custom inter., 35K mi., $2500 or best offer. Call 341-2372 after 5 p.m.

Housing

Room for rent in Los Altos. Call after 5, 948-9072.

Mountain View luxury duplex, 2 miles to Ames, brand new, 3 br, 2½ ba, 1450 sq ft, all appliances, air conditioning, fireplace, garage, $575/month plus security deposit, 941-8013.

Squaw Valley Rental – Skiing with no traffic headaches. Fully furnished condo. Sleeps 5. Adjacent to lifts. Call 964-2170.

FOR RENT: Beach House at Pajaro Dunes (near Watsonville). Completely furnished, including linens; cleaning included in the rent; beautiful views of Monterey Bay, 100 ft from the beach; tennis courts. Reserve now for spring and summer. Call 252-7260.

Miscellaneous

LOST: Warm-up jacket, bright yellow. Last seen 4-11 on the side of road at the Ames 2-mile jog. Please call 656-1871.

I am in desperate need of a ride to and from work, hours flexible. I live near White Rd/San Felipe. Real close to Evergreen College. Or can be dropped off at San Jose Medical Clinic at night. Office phone: 966-5851. Home phone: 238-0762.

NEED RIDE! Daily 7:30-4:00 to Moffett Field from downtown Palo Alto. Will cooperate w/your route. Days 966-5422; eves, 322-9520.

15' Aladdin trailer. Real clean inside. Sleeps 6, stove, icebox, heater, new $275 water reservoir. $1300 or best offer. 867-9395 or 867-5635.

Would like to share driving between Ames and Tasman Drive-Lawrence Expwy (Adobe Wells, Casa d'Amigos, Plaza del Rey). Hour 8–4:30. Call Vivian, 5795.

FOR SALE: Sailboat, 13' Chrysler Lone Star, seats 4, complete with trailer, $500. 253-6294.

Female roommate wanted. Straight, nonsmoker, to share large 2 bdrm apt in Santa Clara, pool, laundry rm. $145/mo + ½ utilities. Please call Monica at 249-0447 days.

FOR SALE: 3 pcs of gray leather luggage. 1 man's 3-suiter, 1 lg Pullman, and 1 med Pullman. $50. Call 226-3315 after 5:00 p.m.

The Astrogram

Admin. Mgt. Building, Phone 965-5422

The Astrogram is an official publication of the Ames Research Center, National Aeronautics and Space Administration, Moffett Field, California, and is published bi-weekly in the interest of Ames employees.

Editor . . . . . Meredith Moore
Associate Editor . . . . Marcia Kadota
Reporters . . . . . NASA Employees

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National Aeronautics and Space Administration
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CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

PREPARED BY:
VISITS COORDINATOR
965-5546 M.S. 253-1

APRIL 30 – Extemporanteous Debate Topic: Engergy topics Time: 10 a.m.- 12 noon Location: Main Auditorium Participants: FREMONT and HOMESTEAD High School Students All employees are cordially invited to attend	MAY 1 – Atmospheric Science Seminar series Speaker: George Smith, U.S. Geological Survey, Menlo Park, CA Topic: "The U.S.G.S. Climate Program and a Sample Project from Southeast California" Time: 1:30 p.m. Location: N-245, Room 215 Ames Scuba Club Monthly Meeting Time: 11:30–1:00 p.m. Location: N-235, Ames cafeteria private dining room Dues are $5.00 per year and payable to Ames Scuba Club, c/o C. S. Yem, 213-8. For equipment loan to paid-up members, contact Jim Ladner, Ext. 5210 or Pager 26-154.	MAY 2 – Ames Stamp Club meeting Time: 7:30 p.m. Location: N-241, Room 237	MAY 3 – Bible Study for Ames and Navy People Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 Noon Location: Bldg. 48, Navy side (Sunday School building)	MAY 4 –
MAY 7 –	MAY 8 –	MAY 9 –	MAY 10 – Bible Study for Ames and Navy People Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 Noon Location: Bldg. 48, Navy side (Sunday School building)	MAY 11 –
MAY 14 –	MAY 15 –	MAY 16 – Ames Stamp Club meeting Time: 11:30 a.m. Location: N-241, Room 113	MAY 17 – Bible Study for Ames and Navy People Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 Noon Location: Bldg. 48, Navy side (Sunday School building)	MAY 18 – If you wish to have an event announced on this Calendar please notify Linda Mackey, Visits Coordinator, Ext. 5546, M/S 253-1. The next Calendar will cover the period May 14—June 1. The deadline is April 24.

WEEKEND ACTIVITIES:

April 28th – ARC Golf Tournament
Spring Valley Golf Course
Time: 11:00 a.m.
Send money to Dave Banducci, M/S 226-3

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

APRIL 24, THRU APRIL 30, 1979

A LA CARTE MENU

TUESDAY
Veal Cordon Bleu.....
Baked Stuffed Knackwurt with Cheese.....
Choice of One: Mashed Potatoes, Rice Pilaf, Green Peas, Carrot Vichy or Salad
Soup - Chile Macaroni.....

WEDNESDAY
Boiled Beef over Noodles.....
Pork Fried Rice.....
Choice of One: Whipped, Ideal Potatoes, Baby Limas, Buttered Broccoli or Salad
Soup - Ames Bean Special.....

THURSDAY
Liver Smothered with Onions.....
Baked Tamale & Chile Beans.....
Choice of One: Snowflaked, Au Gratin Potatoes, Brussel Sprouts, Beets, or Salad
Soup - Cream of Spinach

FRIDAY
Braised Sirloin Tips over Noodles.....
Seafood Crepes.....
Choice of One: Mashed, Parslied Potatoes, Buttered Spinach, Corn or Salad
Soup - Clam Chowder.....

MONDAY
Roast Pork with Dressing, Glazed Apple.....
Turkey Pot Pie Biscuit Topping.....
Choice of One: Snowflaked, Candied Yams, Baby Limas, Green Peas or Salad
Soup - Navy Bean.....

DAILY SPECIALS
INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE..... 1.80

MAY 1, THRU MAY 7, 1979

A LA CARTE MENU

TUESDAY
Veal Steak Florentine.....
Ham Fried Rice.....
Choice of One: Whipped Potatoes, Mashed Yams Green Beans, Corn or Salad
Soup - Tomato, Onion & Macaroni.....

WEDNESDAY
Turkey Cornettes & Sauce.....
Boston Baked Beans & Polish Sausage.....
Choice of One: Snowflaked or Ideal Potatoes, Zucchini & Tomatoes, Beets or Salad
Soup - Beef Barley.....

THURSDAY
BBQ Pork over Rice.....
Curried Seafood on Biscuits.....
Choice of One: Mashed, Au Gratin Potatoes, Buttered Spinach, Hominy or Salad
Soup - Cream of Chicken-.....

FRIDAY
Teriyaki Steak over Rice.....
Tuna Noodle Casserole.....
Choice of One: Whipped, O'Brien Potatoes, Frency Peas, Cauliflower or Salad
Soup - Fulton's Market Clam Chowder.....

MONDAY
Potted Swiss Steak over Rice.....
Ground Beef Macaroni Casserole.....
Choice of One: Savory Green Beans, Harvard Beets, or Salad
Soup - Cream of Potato.....

DAILY SPECIALS
INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

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Space Administration

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Moffett Field, California 94035

NASA

The Astrogram

VOLUME XXI NUMBER 14

May 3, 1979

Asian/Pacific American Heritage Week

President Jimmy Carter has proclaimed the week beginning May 4, 1979 as Asian/Pacific American Heritage Week.

"America's greatness – its ideals, its system of government, its economy, its people – derives from the contribution of peoples of many origins who come to our land seeking human liberties or economic opportunity. Asian-Americans have played a significant role in the creation of a dynamic and pluralistic America, with their enormous contributions to our science, arts, industry, government and commerce.

"Unfortunately, we have not always fully appreciated the talents and the contributions which Asian Americans have brought to the United States. Until recently, our immigration and naturalization laws discriminated against them. They were also subjected to discrimination in education, housing, and employment. And during World War II our Japanese-American citizens were treated with suspicion and fear.

"Yet, Asians of diverse origins – from China, Japan, Korea, the Philippines, and Southeast Asia – continued to look to America as a land of hope, opportunity, and freedom.

"At last their confidence in the United States has been justified. We have succeeded in removing the barriers to full participation in American life, and we welcome the newest Asian immigrants to our shores – refugees from Indochina displaced by political and social upheavals. Their successful integration into American society and their positive and active participation in our national life demonstrates the soundness of America's policy of continued openness to peoples from Asia and the Pacific.

"The Ninety-fifth Congress has requested the President by House Joint Resolution 1007, approved October 5, 1978, to designate the seven-day period beginning on May 4, 1979, as 'Asian/Pacific American Heritage Week.'

"Now, therefore, I, Jimmy Carter, President of the United States of America, declare the week beginning on May 4, 1979, as Asian/Pacific American Heritage Week. I call upon the people of the United States, especially the educational community, to observe this week with appropriate ceremonies and activities.

"In witness whereof, I have hereunto set my hand this twenty-eighth day of March, in the year of our Lord nineteen hundred seventy-nine, and of the Independence of the United States of America the two hundred and third.

"Jimmy Carter."

Sony founder visits Ames facilities

AC79-0310-2

Ames' Dr. Ralph Pelligra (fourth from right) is shown with visitors Masaru Ibuka, founder of Sony, to his right, and Dr. Glen Doman, Director of the Institute for the Achievement of Human Potential, to Dr. Pelligra's left. Mr. Ibuka is very interested in education and has just completed a book entitled "Kindergarten Is Too Late", which stresses the idea that a child's brain should be stimulated and utilized at the earliest age possible. The group visited many Ames facilities and Chuck Kubokawa (pictured far left), Chief of the Technology Utilization Office, acted as an interpreter when necessary.

Astronaut schooling proves exciting and varied

A group of 35 Space Shuttle astronaut candidates have completed months of classroom work and are moving into engineering assignments at Johnson Space Center. In training since July 1978, the candidates will become full-fledged astronauts in July 1980.

Flight crews and flight controllers at JSC are gearing up for intensive training in Shuttle cockpit simulators and in the Mission Control Center at Houston.

Candidate training coordinator Tom Kaiser said of the classes: "They've been more like briefings than classes. This is the first time we've had this thorough a training program."

"This morning, I was counting the years I've been in class like this," said Steve Hawley, astronomer and mission specialist candidate.

"There are no real tests, but you recognize you're going to need this information," added geologist Kathy Sullivan.

NASA brings in instructors from universities or other NASA centers to conduct courses titled: Ascent Aerodynamics; Entry Aerodynamics; Space Physics; Tracking Techniques; and Spaceflight Physiology.

Veteran astronauts deliver lectures on such topics as: How to be a CAPCOM (capsule communicator) and other experienced NASA personnel lead sessions in: "Washington Roundup;" "Evolution of a JSC Budget;" and "People and Requirements, It Takes a Bunch to Make Things Work in NASA."

Trainers say they are putting together a videotape library of the classes for use by all JSC employees.

Now that the candidates are getting out of the classroom, their training takes on a new emphasis. "They're being put straight to work like the rest of us," said astronaut Ed Gibson, who coordinates the candidates' technical assignments.

"The first months, they were in more of an observer mode," he said. "Now they'll be assuming responsibility the same as anybody else in the office."

Candidate Hawley has been working on software for payloads on orbital test flights, an assignment that "evolved into how to support operational payloads." Sullivan has been working on a similar assignment for the second flight.

Pilot Fred Gregory is working on orbiter enhancement, trying to find an ideal cockpit. George Nelson, an astronomer, is working on procedures for getting in and out of a spacesuit.

They all get excited when they talk about the training. "The scientific courses have been fascinating," said Gregory.

"There's an overwhelming amount of information, and it's important to learn every facet," said Nelson.

"The best way to learn how to do it is to go out and do it," said Hawley.

They apply abundant energy to keeping up with a hectic schedule – flying in T-38s, working one-on-one with veteran astronauts, keeping current in their

(Continued on Page 2)

Astronaut schooling

(Continued from Page 1)

specialties and keeping fit. Now and then, they find an hour for racketball or other recreation.

With the Space Shuttle's first flight expected before the end of this year the first astronaut crews have begun lesson sequences in the Shuttle Mission Simulator. The 35 astronaut candidates are observers.

Flying a spacecraft calls for total commitment and preparation calls for comprehensive, integrated training, said James Bilodeau, chief of crew training at JSC.

Eight hours a day, until launch, the astronauts will sit in the cockpit of the fixed-based and the motion-based simulator going through flight procedures. Teams of instructors can feed up to 4,500 malfunctions into a training run. The astronauts respond to each malfunction, carrying out procedures that will keep the orbiter alive and well.

The lesson plan will cover nine months "not counting real-world problems cropping up," Hughes said. By the launch date, the crews will be prepared for nearly any emergency.

"We are at the very bottom of an incredible amount of stuff they will have to learn," said Frank Hughes, crew training specialist.

The simulation instructor teams work from scripts, sheets that look like working TV scripts. The time of the event is in the left column and a description is in the right. Instructions read: "Delay OMS 1 burn due to prevalve fail;" "Gain switches to low during load relief;" or "Late engine out."

Instructors have spent six months learning how to harass the astronaut crews during simulator exercises.

The instructors sit before the cathode ray screens of the simulator computer, watching color graphic and numerical displays. Each instructor has data to monitor. One is checking times of cryogenic pressure cycles, another eyes maneuver rocket systems. They concentrate; eyes always fixed on the screens. They wait for the precise moment to play the devil's advocate.

The constant hum of a roomful of computer databanks drowns out nearby sounds. Occasionally, a loudspeaker voice announces incoming calls. The instructors listen over headphones to communications between the cockpit and other instructors.

In the cockpit, two astronauts run through a procedures verification – the minutes prior to the de-orbit burn. An astronaut candidate looks on, absorbing everything. The simulated sound of maneuver jets is heard. "OK, OMS engine is on," says the pilot. "I'll burn the engine in manual," says the commander. He grabs the stick and the "current orbit" numbers decrease. With the exercise completed, the instructors reset the computer, and the crew gets ready to perform the task again.

Next morning another commander and pilot sit at the cockpit in the simulator. It is two minutes before launch. There is the sound of engines firing, and on the control panels the velocity and altitude are going up.

An instructor at one of the consoles puts in an auxiliary power unit malfunction command and emergency lights come on in the cockpit announcing "APU underspeed." The hydraulic pressure lights go on.

The pilot throws the correct switches and the emergency is over.

"These malfunctions will get more difficult in the next few weeks," Hughes says.

The system clears and the crew is ready to launch again with more "what-ifs?"

When the candidates become full fledged astronauts, some will also use a different facility, a high-fidelity trainer at JSC, that acquaints astronauts with the close quarters aboard the Space Shuttle orbiter.

The orbiter's mid-deck serves as living room, dining area, kitchen, den and bedroom; "all but the drivers' seat and workshop," said Bob Bond, trainer manager. Bond pointed out the drawers in the walls where suitcases go and hooks where orbiting crews will hand in their sleeping bags at night.

Crew members will use the trainer for habitability exercises: food preparation and finding where to stow things – from instruments to trash. There are 15 lessons for each crew, such as how to operate on-board cameras and emergency procedures for loss of cabin pressure.

The astronauts also will use the trainer to practice going through an airlock to work in the 4.5-by-20 meter (15-by-65 foot) payload bay. Crew members crawl through an opening in the mid-deck and lock their feet into the ceiling.

Then, reading the controls, which on Earth are upside down, they close the hatch, depressurize the airlock, open the outside hatch, and push out to the payload bay.

After 1980's orbital flight tests, living quarters on the Shuttle will be made more spacious. Extra water tanks to supplement the water obtained from the fuel cells will be removed along with a test pallet that contains data from the vehicle. This will provide room for a set of bunks, "a personalized cocoon you can slide into to read a book or play music," Bond said.

Host families needed

Cupertino area host families are needed for an exciting, fun-filled 3-week Scandinavian student summer program. The students, who range in age from 16 to 22, will be here from June 26 to July 16. Family get-togethers and picnics are planned. You will meet new families, learn about another culture and share the American way of life (and have a great time!). For further information contact Dianna at 257-7267 (evenings and weekends).

Civil Service Reform Act

The Civil Service Reform Act links pay to performance for managers and supervisors in grades GS-13 through -15. It does away with automatic step increases and replaces them with a merit pay system under which raises can be larger and come faster.

Merit pay will not cost any more, but will merely distribute the money differently than under the present system.

When the annual comparability increase for white-collar workers is announced, all managers and supervisors will get at least half the authorized percentage. If the comparability increase is four percent, for example, GS-13 to -15 supervisors would get at least two percent. The part of the increase not paid to supervisors would be placed in a "merit pay pool." Funds normally earmarked for within-grade and quality step increases would also go into the pool. The pool then would be divided among managers and supervisors in the form of merit raises based on performance.

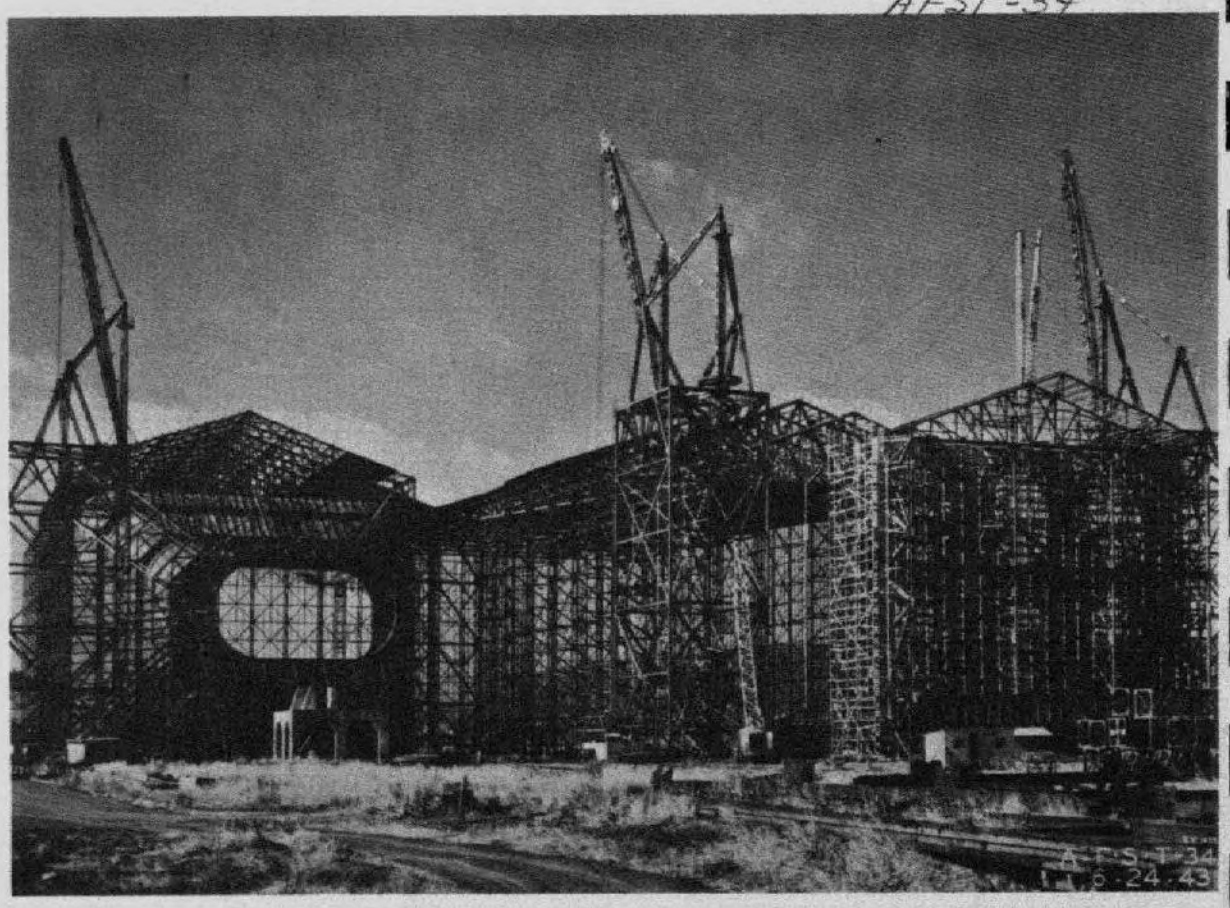
The merit pay system will not go into effect at the same time in all agencies. Some agencies could start using the system as early as October 1979, but all must be using it by October 1981. While NASA has not firmed its timetable, center supervisors could be in the Merit Pay system by October of this year. Since it will be based on performance, a key to when agencies can begin to use merit pay will be how fast they can develop new performance appraisal systems to accurately measure performance. NASA's system should be ready sometime this summer.

Merit raises would be part of basic pay, and would thus increase retirement and other fringe benefits. Supervisors would be eligible for merit pay consideration each year, and would not have the two or three year wait required for some within-grade raises under the present system.

The Civil Service Reform Act also provides lump sum cash awards, both for supervisors and for supervisors to give to their employees, in recognition of good ideas or jobs well done. The head of an agency may grant an award up to $10,000. With approval of the OPM, awards up to $25,000 will be possible in exceptional circumstances.

The 40' x 80' Wind Tunnel in 1943

AFST-34



US/USSR to conduct joint space medicine study

NASA and Soviet life scientists will join for the first time in a ground-based cooperative study to investigate physiological changes in humans resulting from simulated weightlessness.

Objectives of the joint study are to improve bedrest test procedures to help standardize physiological measurements and analysis techniques performed on astronauts and cosmonauts, and to help reduce test duplication and increase the flow of information between the two groups.

The project was established two years ago under the auspices of the joint U.S./USSR Working Group on Space Biology and Medicine. Dr. Gerald Soffen, NASA Director of Life Sciences and Dr. N. N. Gurovsky of the USSR Ministry of Health are co-chairmen. The project involves Dr. Harold Sandler, Chief Biomedical Research Division at Ames, as project scientist; Dr. Carter Alexander of the Johnson Space Center as project manager; Ms. Danielle Goldwater, Deputy Project Manager; and Ms. Dee O'Hara, R. N., as facility manager for the U.S. part of the project.

Many of the effects on individuals of the weightless environment of spaceflight can be simulated on Earth by bedrest. The research study includes two identical experiments, each involving 10 test subjects, ages 35 to 40 years. Each experiment will last five weeks, with two weeks of control observations, one week of bedrest, and two weeks of post-bedrest measurements.

Stress tests of the cardiovascular system, including response to exercise, and extensive blood and urine sample analyses will be performed.

Experiment procedures call for five test subjects to remain horizontal in a total bedrest condition, and for five to experience bedrest with their heads lowered six degrees from the horizontal. Previous bedrest studies in the United States have been conducted with the subjects in a horizontal position only. Soviet scientists have conducted studies with subjects placed both in the horizontal position and with subjects exposed to varying degrees of head-down tilt. The current studies will determine the best features of each procedure.

The first five week study will be conducted at the Institute of Biomedical Problems in Moscow, beginning in mid-May. The second will start here at Ames in mid-July. There will be an exchange of NASA and USSR life scientists during each of the experiments.

Members of the U.S. team will include scientists from several universities. Edward Ifft, chief of the International Program Policy Office at NASA Headquarters, Washington, D.C., is coordinating arrangements with the U.S. Department of State and the Soviet Union.

FEW meeting May 8

The South Bay Chapter of Federally Employed Women (FEW) invites all federal (military and civilian) employees (women and men) to its next meeting on Tuesday, May 8, from 5:30–7:30 p.m. at Mercury Savings and Loan in the San Antonio Shopping Center in Mountain View. The program is "Speaking: A Positive Experience." The speakers will be Linda Cosio, Chairperson of the Membership and Talent Bank Committees and Etta Rosamond, Treasurer of the South Bay Chapter of FEW.

Linda and Etta are members of the International Toastmistresses and Toastmasters, respectively. They will talk about the objectives of their respective organizations and the various activities that each organization offers.

FEW is an organization promoting equality and equal opportunity for women in government. The South Bay Chapter, active since 1975, is one of hundreds of FEW chapters throughout the United States and overseas.

"Thank you"

Pete Haro, thank you for nominating me for "Secretary of the Year for the Branch." Receiving the award gave me a wonderful feeling. The recommendation itself showed awareness of the many and varied tasks that might seem to be taken for granted at the time. Primarily, it expressed recognition and appreciation for being part of the team, and for that I thank you very much.

Your Secretary

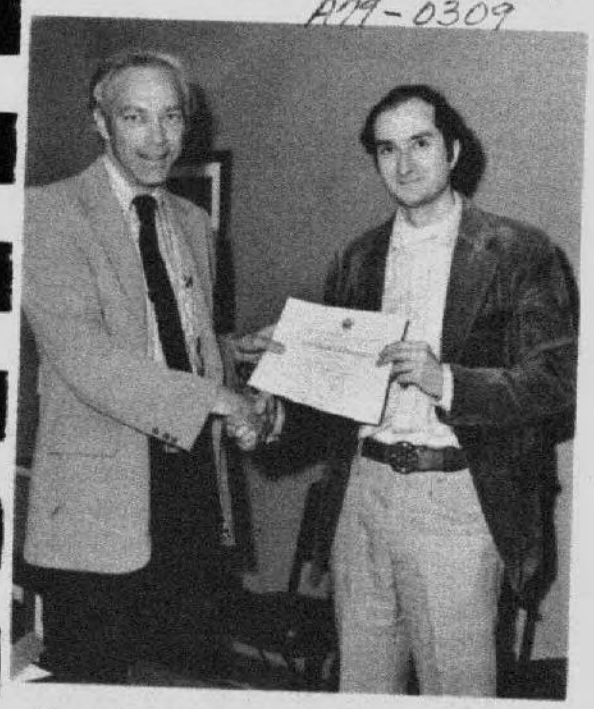
Notice

The Training Branch is missing several of the tapes used for recording the televised courses. If you have one in your possession, please return it to Mail Stop 241-3. We do reuse the tapes and are currently running low in availability.

In addition, the Training Office would like to remind people that we provide the taping of classes as a service and would appreciate it if you would request this service only if you are on travel or ill. Thank you.

AVRADCOM announces promotion

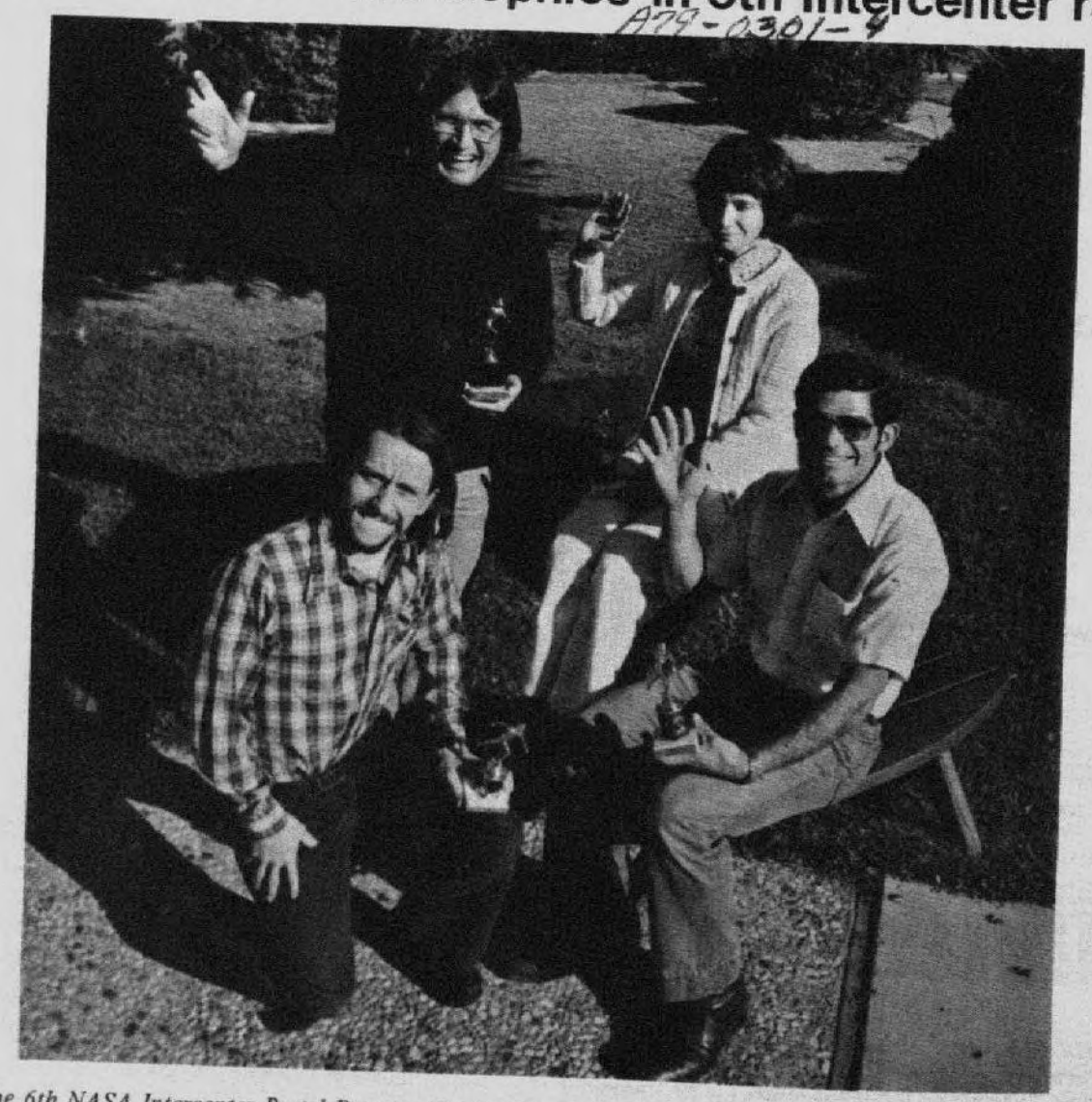
A79-0309



The Aeromechanics Laboratory, U.S. Army Research and Technology Laboratories (AVRADCOM) announces the promotion on March 11, 1979, of Dr. Wayne R. Johnson to Aerospace Engineer GS-14. Dr. Johnson, a member of the Rotorcraft Dynamics Division of the Aeromechanics Laboratory, is assigned to the NASA-Ames Large Scale Aerodynamics Branch where he heads the Rotorcraft Research Section. Dr. Robert A. Ormiston, Chief of the Rotorcraft Dynamics Division is shown (left) presenting the Certificate of Promotion to Dr. Johnson (right).

Ames runners earn trophies in 6th Intercenter race

A79-0301-4



The 6th NASA Intercenter Postal Running Competition last October, brought trophies to the following individuals here at Ames: Vito D'Aloia (standing) 2nd place overall in the 10,000 meters, time 36:58. Karen Villere (seated, upper right) received two trophies for 3rd place overall – one for the two miles, time 13:57, and the other for 10,000 meters, 49:30 time. Goetz Klopfer (seated, lower left) placed 2nd in the overall 10,000 meters in 36:58. John Bouldt, placed 3rd in the overall 10,000 meters with 30:34 as his time.

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
79-73	Secretary (Typing)	GS-4/5	DE	NASA-Ames/ Army/Tenant Organizations	5-18-79
79-77	Electronics Mechanic (area of consideration and closing date extended)	WG-10/11	FOS	Ames/Outside	5-11-79
79-82	Aerospace Engineer	GS-12/13	FHI	Ames/Outside	5-25-79
79-83	Computer Technician (GO)	GS-4/5	RI	Ames only	5-18-79
79-84	AST Technical Management	GS-11/12	LBE	Ames only	5-18-79
79-85	Secretary (Typing)	GS-4/5	R	Ames/Outside	5-18-79
79-86	Lead Travel Clerk	GS-5/6	AFP	Ames/Outside	5-18-79
79-87	Secretary (Typing)	GS-4/5	LR	NASAwide/ Outside	5-18-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
79-34	Librarian	ATL	Diana Brown (outside candidate)
79-43	Aerospace Engineer, AST Fluid and Flight Mechanics	FSA	Betzina, Mark
79-52	Aerospace Engineer, AST, Flight Systems	FSV	Yee, Robert
79-64	Secretary (Typing)	RFS	Mary Shiles

Message to all retirees

The tour office is looking for a few good men and women to act as guest tour directors. We can promise you challenging, rewarding, and interesting experiences sharing your knowledge of Ames with others.

If you think you would be interested in donating an occasional morning or afternoon to the tour program we would like to hear from you. Please call either Nancy Taylor or Garv Hoefler at 965-6497 for more information about this program.

Garden Club

Foothill Men's Garden Club annual spring plant sale – Saturday, 12 May at Saratoga Shopping Center, Big Basin Way, Saratoga. For Mother's Day presents – hangars, succulents, dish and rock gardens, plus cut flowers, petunias and marguerites are available.

"Thank you"

Retirement is great! To all my friends who attended my luncheon, thanks for everything and most of all thanks for being there. It was great to see so many of you.

Gil Lamica

Want ads

Transportation

FOR SALE: 1969 Chrysler Newport 4 dr sedan, R/H, P/S, new tires, battery & seat covers. Good condition. 967-5894.

WANTED: Minibike or Moped under $150. 253-1454.

1978 Monte Carlo: V6 GAS SAVER, Air, PS/PB, Velour interior, AM/FM Sterio cassette player, under 16,000 miles. Call (408) 241-2410 after 5:00 p.m.

Housing

Male housemate wanted: Own room in 3 br/2 ba Mt. View house. Nonsmoker. Available May7– Aug 31 only. $135/mo. 965-0845 evenings.

Female roommate wanted: 2 br house-sharing, best location between Mathilda and Maude, rent negotiable, call Danielle after 3 p.m. at 737-0686.

FOR RENT: Beach house at Pajaro Dunes (near Watsonville). Completely furnished, including linens; cleaning included in the rent; beautiful views of Monterey Bay, 100 feet from the beach; tennis courts. Reserve now for summer and fall. Call John Lundell, 252-7260.

FOR SALE: Sony Trinitron 19" color TV. 1 year old. $400/offer. Call 244-9199.

FOR SALE: men's 10-speed bicycle, 25" frame. 1977 UNIVEGA with many extras. Pump, waterbottle, Sugino crank and seatpost. New freewheel, uniglide chain, and side pull brakes. $165. 968-8184.

Ticket sales

The ARA store has the following special priced tickets for sale during the regular store hours from 12 noon to 12:45 p.m. on Tuesdays and Thursdays.

	Special Price	Regular Price
Great America	$8.00	$9.75
Frontier Village	5.25	6.95
Marine World	4.25	7.25

These prices are good for adults but for children the savings are very little. Please check the regular prices for children when you buy the tickets at the store to make sure you are getting what you want.

East/West Journal

A weekly Chinese-American journal is now available at the Ames main library, mail stop 202-3. Though predominantly Chinese, the journal disseminates current events and issues of concern not only to the Chinese constituents but also to the Asian Americans in general. Anyone interested in reading the journal may call 5157 or stop at bldg. 202-3.

Miscellaneous

Would the person who mailed info to Dr. Mary McKelvey, Biology Department, Director, MARC Program Fisk University, Nashville, Tenn., please contact Mildred Macon, ext. 5669 or building 241, rm 113B.

FREE PUPPIES – part bassett, part ?. Cute and adorable. Call 964-7863.

House painting after June 20th. Interior or exterior. Call 253-6676 after 5 p.m. References furnished upon request.

POOL: Don't be behind the 8-ball. Stay between the Stripes & Solidly in the Rotation. Break for work @ 7:30 and Rack-Em-Up for home @ 4:00. Take the Cue and call Herb Finger (ext. 6598), Jim Connolly (ext. 6609), or Cindy Simmons (ext. 5603). No Trick Shots.

FOR SALE: 16" sidewalk bike w/training wheels – $20; Honda Kick-and-Go (scooter) – $10. Call Angie on ext. 6314.

Spring carpet cleaning special – 9¢/sq.ft. (furniture moving included). Carpets dry in 40 min; no steam or shampoo – Chem-Dry of San Jose, (408)866-8675.

FOR SALE: electric composter. Very good cond., asking $175. Call 657-4247 after 6 p.m. and on weekends.

Built-in Waste King dishwasher, stainless steel, brown, working condition, $50.00. Phone 946-3588.

Two solid fir (unfinished) ornamental entry doors, 36"x80", with small inspection window, covered with ornamental wood screen. New, never used. New price: $190 each. Sell: $75 each. Phone 946-3588.

The Astrogram

Admin. Mgt. Building, Phone 965-5422

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Editor . . . . . Meredith Moore
Associate Editor . . . . Marcia Kadota
Reporters . . . . . NASA Employees

Deadline for contributions: Thursday between publication dates

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Ames Research Center
Moffett Field, California 94035

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965-5546 M.S. 253-1

CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

May 14 –	May 15 – Flight Systems Software Verification and Validation Seminar Presentation by Honeywell Systems and Research and Lockheed-Georgia Time: 9:00 a.m. – all day Location: N-210, Room 205 Contact: William E. Larsen, ext. 5049	May 16 – Ames Stamp Club Meeting Time: 11:30 a.m. Location: N-241, Room 113 National Federation of Federal Employees (NFFE) monthly meeting Time: 12:00 – 12:30 p.m. Location: N-213, Room 261	May 17 – Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building) Space Science Division Seminar Series Speaker: Dr. Laurence A. Soderblom, Astrogeology Division, U.S.G.S., Flagstaff, Arizona (Imaging Team co-leader, Voyager Project) Topic: "Voyager I and the Worlds of Jupiter" Time: 10:30 a.m. Location: N-245, Auditorium	May 18 –
May 21 –	May 22 –	May 23 –	May 24 – Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	May 25 –
May 28 – Memorial Day	May 29 –	May 30 – Ames Photo Club monthly meeting Time: 4:45 p.m. Location: N-245, Auditorium	May 31 – Space Science Division Seminar Series Speaker: Dr. Joseph S. Miller, Lick Observatory, U. of CA, Santa Cruz, California Topic: "BL Lacertae Objects" Time: 3:30 p.m. Location: N-245, Auditorium Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	Jun 1 – If you wish to have an event announced on this calendar please notify Linda Mackey, Visits Coordinator, Ext. 5546, M/S 253-1. The next calendar will cover the period May 28 – June 15. The deadline is May 8.

WEEKEND ACTIVITIES:

May 19th – ARC Golf Tournament
Sunnyvale Municipal Golf Course
Time: 9:30 a.m.
Chairmen: Mike Orozco and Wayne Harry
Send money to Dave Banducci, M/S 226-3

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

MAY 8, THRU MAY 14, 1979

A LA CARTE MENU

ESDAY	Veal Parmesan with Spaghetti..... Chicken Croquettes and Creamed Peas or Omelette..... Choice of One: Whipped Potatoes, Buttered Spaghetti, Green Beans, Glazed Carrots or Salad Soup - Cream of Potato.....
WEDNESDAY	Bar-B-Que Pork and Hot Wine Slaw..... Lamb Curry with Noodles or Omelette..... Choice of One: Mashed Potatoes, Candied Yams, Buttered Spinach, Cauliflower or Salad Soup - Split Pea & Sliced Pranks.....
URSDAY	Beef Steak Creole Style with Rice..... Baked Tuna and Noodle Casserole or Omelette..... Choice of One: Whipped Potatoes, Mashed Sweet Potatoes, Spinach, Buttered Beets or Salad Soup - Cream of Chicken.....
IDAY	Shrimp Chow Mein and Rice..... Chicken Tetrazzini or Omelette..... Choice of One: Whipped Potatoes, Rice Pilaf, Zucchini and Tomatoes, Hominy or Salad Soup - Seafood Gumbo or Borscht.....
MONDAY	Roast Veal and Dressing..... Venetian Pie or Omelette..... Choice of One: Snowflaked, Lyonaise Potatoes, Green Beans, Cauliflower or Salad Soup - Chicken Noodle.....
ILY ECIALS	INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

* * * * * * * * * * * * * * * * *

MAY 15, THRU MAY 21, 1979

A LA CARTE MENU

TUESDAY	Beef Roll with Mushroom Sauce..... Knackwurst and Red Cabbage or Omelette..... Choice of One: French Fried or Whipped Potatoes, Savory Beans, Carrots or Salad Soup - Vegetable.....
WEDNESDAY	Baked Ham with Raisin Sauce..... Swedish Meatballs with Rice Pilaf or Omelette..... Choice of One: Whipped or Au Gratin Potatoes, Spicy Beets, Green Beans or Salad Soup - Tomato, Macaroni and Onion.....
THURSDAY	Betsy Ross' Orange Baked Chicken and Rice..... Macaroni and Beef Casserole or Omelette..... Choice of One: Hash Brown or Whipped Potatoes, Mixed Vegetables, Stewed Tomatoes or Salad Soup - Beef Barley.....
FRIDAY	English Fried Sole and Tartar Sauce..... Creole Omelette or Thomas Jefferson Souffle..... Choice of One: Rice, O'Brien, Whipped Potatoes, French Peas, Zucchini or Salad Soup - Clam Chowder.....
MONDAY	Juliene of Beef, Creole Style on Rice..... Dr. Wendell Holmes Omelette or Denver Omelette..... Choice of One: Rice, Whipped Potatoes, Buttered Peas Corn O'Brien or Salad Soup - Tomato and Vegetable.....
DAILY SPECIALS	INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

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Space Administration
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NASA

The Astrogram

VOLUME XXI NUMBER 15

May 17, 1979

Attention veterans and their dependents

President Carter has set aside the week of May 28 to June 3, 1979 as Vietnam Veterans Week. This was done as an expression of thanks for the Vietnam Veterans' service to their country during a long and controversial war. The emphasis will be on the contributions of this era's Veterans to their Nation; the success of the Veterans upon returning to civilian life; and the services available to them now in their communities.

Of especial interest to many Veterans are the Educational Benefits because these benefits expire 10 years after separation from active duty. Many colleges have Veterans Affairs Offices that offer a wide variety of services to Veterans and their dependents. Dependents of deceased or disabled Veterans may also be eligible for benefits.

De Anza College's Office of Veterans Affairs (OVA) offers a wide variety of services to veterans and their dependents. Some of the areas in which they can assist you include free tutoring, career counseling, VA work-study, on-the-job learning experiences for college credit, job placement, financial aide and discharge upgrading referral. Also, they can help you with information regarding home loans, Cal Vet loans, medical, dental and disability benefits.

The OVA is located behind the Learning Center at De Anza College and is open from 8 a.m. to 9 p.m., Monday through Thursday, and 8 a.m. to 4:30 p.m. on Friday. Give them a call at (408) 996-4595. And remember, Veterans will lose some benefits if they aren't used within 10 years from separation from service.

Library art exhibit

Intaglio art by Naomi Zapanta, a local artist, will be on display in the Ames library for the next few weeks for the pleasure of interested employees. Intaglio art is a very old technique of working with metal-plate techniques such as engraving, etching, dry-point aquatint, etc.

Ms. Zapanta has a limited number of prints per edition available. Stop by during the lunch period.

ARA sponsored happy hour May 25

The ARA is sponsoring a Happy Hour on May 25, 1979, 4:30 to 6:30 p.m. in the cafeteria. All Ames and resident contractor personnel (and spouses) are cordially invited to attend. The Happy Hours provide an opportunity for you to meet and talk with others at Ames in a light and relaxed setting. Come on over.

1979 Galileo Memorial Scholarship presented to winner and finalists

The Galileo Memorial Scholarship was presented to the 1979 winner Dana Wayne Tom of Lowell High School in San Francisco and to the five finalists on Thursday, May 3rd, at a dinner in the Ames Cafeteria. Dana earned a $750 scholarship while the other finalists each received a $100 Savings Bond.

The winner is selected on the basis of an essay, limited to 1200 words, which describes the career that the applicant intends to pursue and the proposed course of study; scholastic standing as determined by grade-point average and scholastic aptitude or other college entrance test scores; a letter of recommendation from a teacher; and an interview by the Selection Committee.

The scholarship is open to high school seniors who are either residents of San Francisco, San Mateo, Santa Clara, or Santa Cruz County or children of Ames Research Center career employees, retirees, on-site support service contract employees, or Galileo crew members.

The Galileo Memorial Scholarship Program was established in 1973 by the San Francisco Section of the American Institute of Aeronautics and Astronatucis and the Ames Research Center of the National Aeronautics and Space Administration as a memorial to the men who perished in the accident of Galileo I. Like its replacement Galileo II, Galileo I was a Convair 990 aircraft, modified and operated by Ames as an airborne laboratory for research in aeronautics, astronautics, astronomy, and earth observations. The scholarship program is intended to assist and encourage high school seniors to pursue careers in engineering, mathematics, and the physical or natural sciences.

A79-0355-1

Top Galileo finalists pictured (left to right) are Richard Barnoski, Computer Sciences Corp. Selection Committee; May S. Fan, Finalist; Dana Wayne Tom, Winner; William L. Abbott, Finalist; Earl V. Petersen, NASA Ames Selection Committee; Julia S. Kornfield, Finalist; Mamoru Inouye, NASA Ames Scholarship Chairman; Paul A. Thompson, Finalist; and Marc A. Ullman, Finalist. Not pictured is Henry Lum, Jr., Selection Committee, NASA Ames.

Engineering exam deadline approaches

Engineers seeking registration as Professional Engineers are reminded of the July 6 deadline for returning their examination applications. The Engineer-in-Training deadline is August 31.

If you have questions about the exams – how to qualify or prepare for them – you are invited to a no-cost, no-obligation question and answer hour to be held at 7 p.m. on June 19 at Menlo College in Menlo Park. The session will be presented by the Professional Engineering Institute which will again offer preparatory review courses starting in July for the E-I-T, Mechanical, Electrical and Chemical exams.

To obtain more information or to reserve a place at the introductory session, call (415) 593-9731 or write: Professional Engineering Institute, P.O. Box 911, San Carlos, CA 94070.

The Professional Engineering Institute is a state-approved, non-profit educational organization. It is an equal opportunity employer and admits to its courses students of any race, color, and national or ethnic origin.

A recap of the successful secretaries luncheon

A79-0366-60

"Great speaker" . . . "Good food" . . . "Let's do it annually" . . . you made those comments in previous years and you made them again following the Secretaries Week Luncheon held at the Bold Knight, Wednesday, April 25.

Everyone could relate to Dr. Mina Johnson's suggestions to create a truly effective working relationship between the secretary and her supervisor. May this be the year to put those suggestions into effect!

The highlight of the luncheon was the presentation of the secretarial awards by Mr. A. Thomas Young, Ames' Deputy Director, to Mrs. Kitty L. Haugh (Code D), Mrs. M. Louise Mahaffie (Code FH), and Mrs. Carole A. Barrie (Code RSE) (left to right in center photo). Excerpts read from the memoranda nominating these award recipients made us aware of the contributions made by these outstanding secretaries.

The Luncheon Planning Committee and Women's Advisory Group take this opportunity to thank all of the 225 attendees for helping to make this event such an outstanding success. A great way to honor the secretaries with whom you work!

Several photos were taken at the Secretaries Luncheon. You are invited to view the album in the Photo Lab.

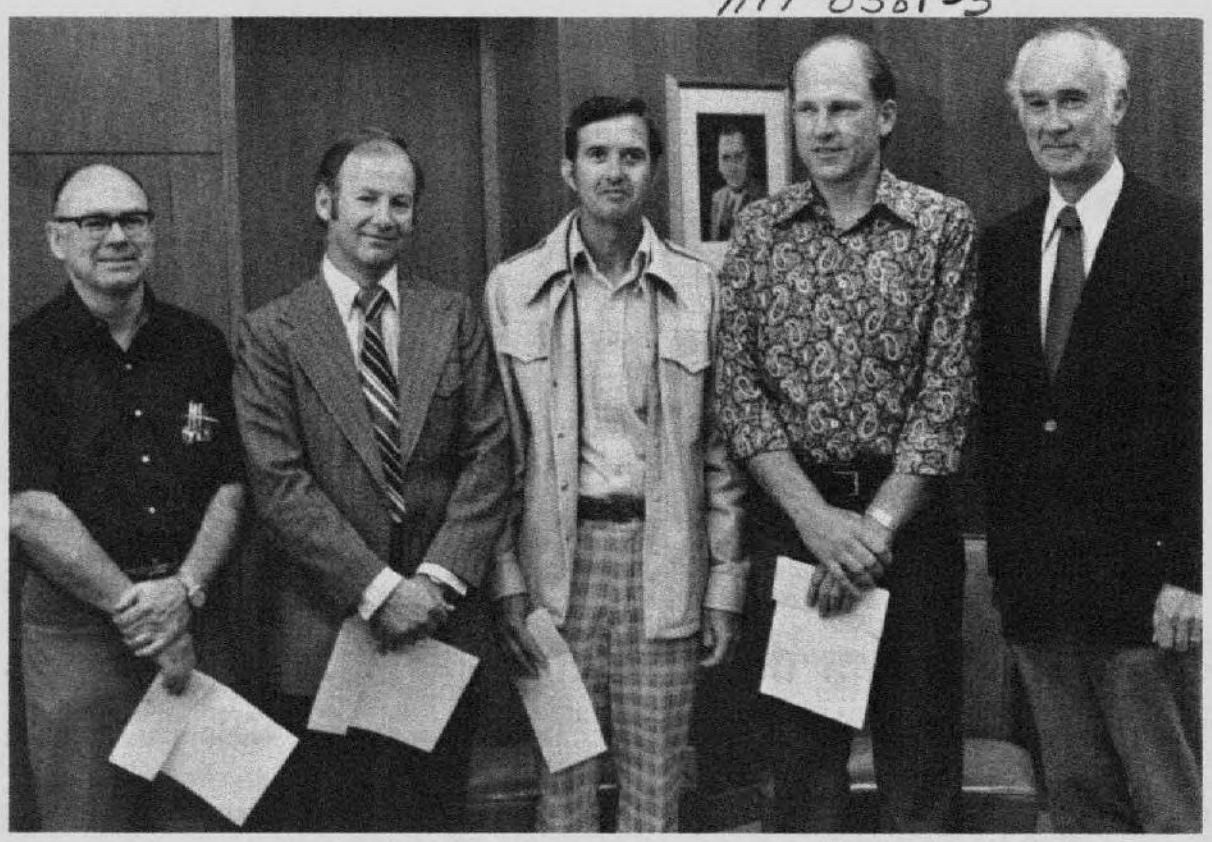
A79-0366-56

A79-0366-4

A79-0366-59

Sustained Superior Performance Awards granted

A79-0381-5



During a recent ceremony at Ames Research Center, Mr. Loren G. Bright, Director of Research Support, presented to employees letters in recognition of sustained superior performance from the Center Director, along with monetary awards. Pictured above are, left to right: Mr. Robert W. Eglington, Electro Systems Engineering Branch; Messrs. Dean R. Harrison, Donald E. Humphry and Robert C. Hedlund, Electronic Instrument Development Branch; and Loren G. Bright. Recipients who are not pictured above were: Mrs. Eva Turenchalk, Research Equipment Engineering Branch, and Mr. Lee W. Jones, Photographic Technology Branch.

Want ads

Miscellaneous *(Continued from Page 4)*

Bunnies to good homes. Please call Anita at 255-6585.

Found: Pocket knife with multi blade, etc. Call Skip Yem, ext. 6391, or 26-167 to claim.

Camera, Olympus Pen-F, 35 mm SLR, plus 25 mm wide angle and 150 mm telephoto lens. $200. 257-3175 after 6 p.m.

Will house-sit your house this summer. Newly married, non-drinker and non-smoker. Could pet sit also. 736-8550.

Are you planning a party or wedding reception? Brighten it up with live music. "The Satin Dolls" may be exactly what is needed. These three girls play the organ, drums, and guitar and they also sing your favorite songs. Their music consists of yesterday's hits to the current disco beat. Many references. 739-9768.

Merit promotion slot: Job title – Driver/Rider. Exclusive to GS, WG, AWOL, and LWOP only. Area of consideration – Saratoga at 280. Length of duty – 7:30–4:00. Submit completed SF171 for evaluation. Selecting officers: Jim Connolly (ext. 6609), Herb Finger (ext. 6598), and Cindy Simmons (ext. 5603). An Equal Opportunity Ride Group.

Stereo receiver: Sherwood S8900, 48 watts/channel RMS. Consumer Report No. 1. Like new $100/offer. 227-2480 after 6:00 p.m.

Mi Ae Lipe Art exhibit

The Mi Ae Lipe Art Exhibit in the Life Sciences Library, Bldg. 239, will be closing Thursday, May 31. Mi Ae, now age 9, is the adopted Korean daughter of Dewey and Nancy Lipe of Portola Valley. Mi Ae has had several exhibits, two of which have been at Ames. One of her drawings will again be offered at the San Francisco KQED Auction. Only a few drawings remain for sale in the Life Sciences Library. This latest drawing reflects Mi's growing charm, humor, and talent.

Army Research Lab honors three employees

Dr. Richard M. Carlson, Director, Army Research and Technology Laboratories RTL AVRADCOM, presented awards to three employees during special ceremonies held recently here at the Laboratories' Headquarters, Ames Research Center.

Left to right, Dr. Carlson; Lucinda Rea, Program Analyst, Plans, Programs, and Budget Division, received a Certificate of Promotion; John A. Grant, Jr., received an Outstanding Performance Award and a Quality Step increase for providing "leadership and supervision" to achieve "quality program management staff support to the Director, RTL," during his (Grant's) temporary assignment as Chief, Plans, Programs and Budget Division, and for guiding "his organization through a complete reorganization and realignment of position structure." In addition, he consolidated "all RTL accounting responsibilities within the Laboratories, and was instrumental in designing the concept for automating the Laboratories."

Patricia A. Campbell (Patty), Secretary, who received an Outstanding Performance Rating, was cited for her "reputation of being an unquestioned authority on any and all office administrative procedures," and for "her timeliness and efficiency in handling correspondence, both routine and nonroutine," which has "contributed greatly to the efficiency of the Advanced Systems Research Office," which is under the direction of Frederick H. Immen.

A79-0360-

ARC wins spring NASA-wide jogging competition

Ames gathered the most points in the NASA Intercenter Jogging Competition for this spring. The competition, which was held in the first 2 weeks of April, had 2-mile and 10-km events. Scoring was based on age groups for men and women and included speed of the participants and participating fraction of each Center's staff. Ames fares well because we have good runners and good participation.

In the 2-mile event, 140 of 634 entries were from Ames. In the 10-km event, 78 of 337 entries were from Ames.

Results were:

Center	*2 Mile Points*	*10 km Points*
Ames	*606.22*	*340.61*
HDQ	*395.95*	*136.94*
DFRC	*350.78*	*170.45*
JSC	*305.84*	*139.42*
LaRC	*251.22*	*156.48*
GSFC	*212.30*	*137.58*
JPL	*152.87*	*199.46*
LeRC	*152.28*	*121.75*
MSFC	*125.47*	*76.05*
KSC	*71.16*	*60.35*

Golf

It's an easy game, if you can keep the ball in play! Did Dust say that? Nevertheless, Don Dust (and his helper Lynne) did say that 59 golfers played in "his" tournament at Spring Valley Saturday, April 28, 1979. A steady wind, tricky-to-read-and-play greens, scraggly roughs and water were the main inhibiting factors to good play. But not so to the second flight, they blistered the course.

These are the winners of the various flights:

First Flight: 1 - A. Petretti, 2 – B. Odneal and R. Ramos, 3 – F. Johnson

Second Flight: 1 – N. McFadden, V. Oyama and M. Radovich, 2 – D. Dust

Third Flight: 1 – S. Brovarney, 2 – D. Pachucki, 3 – C. McCloskey, 4 – A. Joly

Fourth Flight: 1 – G. Rathert, 2 – C. Banducci, 3 – I. Rathert, J. Levin, and J. Pogue

The lowest net scores for the day were McFadden (really hot), Oyama and Radovich at 63, and D. Dust at 64. Super! Those grossing low were Petretti (regaining old form) 76, and Ramos and F. Johnson at 77. Next tournament is at Sunnyvale Muni on May 19.

ARA Store

ARA Store Special of the Month –

Schaeffer Desk Pen Set, regular price, $3.00, sale price, $2.50 (sale lasts through the end of May).

New dental plan

Jean B. Johnston will be here on May 31, Thursday, from 11:00 to 1:00, in Bldg. 241, Rm. 147, to present her new prepaid dental plan. Anyone interested in a dental plan is welcome to attend.

A sad "Goodbye"

As of May 4, I will be leaving Ames and would like to thank you all for your wonderful smiles and hellos these past six years. And a special thanks to the volleyball pros who let me join in at lunchtime. I'll miss you all!!!

Marge Cahill
U-2 Office

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
79-88	Secretary (Typing)	GS-5/6	RK	NASA/Ames/ Tenant Agencies	5-29-79
79-90	Secretary (Typing) Secretary (Stenography)	GS-318/4/5 GS-318/4/5	SST	Center/outside	6-1-79
79-89	Electronic Technician	GS-10/11	FOS	Ames/Army/ Tenant	6-1-79
79-91	Supvy. Aerospace Engineer	GS-13/14	FSN	NASA-wide	6-11-79
79-92	Secretary (Typing)	GS-4/5	FAR	Ames/Army/ Tenant/outside	6-1-79
79-93	Research Aircraft Mechanic Foreman	WS-12	FOS	Ames/Army/ Tenant	6-1-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

ARMY VACANCIES

Y-9-79	Secretary (Typing)	GS-4	FHR	Army, Centerwide, Ames & outside	5-25-79
Y-10-79	Aerospace Engineer	GS-7/9/11	Aero Mech Lab	Army, Centerwide, Ames & outside	5-25-79
Y-11-79	Aerospace Engineer	GS-9/11	Aero Mech Lab	Army, Centerwide, Ames & outside	5-25-79

TO APPLY: Complete APM 62 and submit to Mail Stop 241-6.

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
79-25	Supervisory AST Technical Resources Management	AR	Ralph Robinson
79-65	Model Maker	RSC	James Hogan
79-57	Computer Specialist	FSA	Betty Wong
79-63	Wind Tunnel Mechanic Foreman	FAO	Joseph Lamica

Want ads

Transportation

"Real gas saver," 1979 Ford Mustang, 2 dr, 4 cyl, 4 spd, silver ext., maroon int., AM radio, less than 1000 miles, 36 month extended warranty. $600 down and take over payments of $125.04 a month. Argus 866Z movie projector (not sound) reg or super 8mm, used 3 times, 4 months old, $60. Call 262-0624.

For Sale: 1973 AMC Matador, 4 dr, PS/PB, AC, exc. cond., must sell, best offer, call 961-6374.

'78 Dodge Window Van, VA, automatic, stereo, power steering, power brakes, fully padded and insulated. Looks and runs great. Air conditioning. $5800 or take over payments. 968-5697 after 5:00 p.m.

'74 Firebird 350 2 bbl. AT, PS, PB, AC, AM radio, 84K miles. $3500. Butch, ext. 6350.

Wanted: Good economy car for under $1000. Call Larry Hall 964-9900 days, 968-3307 eves.

Housing

Mountain View luxury duplex, 2 miles to Ames, brand new, 3 br, 2½ ba, 1450 sq ft, all appliances, air conditioning, fireplace, garage, $575/month plus security deposit, 941-8013.

For Lease: 4 bdrm, 2½ ba home. Rockefeller Drive, Sunnyvale. $650/mo. Super area – beautiful landscaping. Includes: fulltime gardener, washer, dryer, refrigerator, oven, range, dishwasher, and water (prefer min. 1 yr lease). Call 941-9800 or 736-0570.

Roommate needed to share new 4 bdrm house in Milpitas. $150/mo. plus utilities. 262-2183.

Tahoe summer rental, Meeks Bay. Call 324-2043.

Room for rent: Sunnyvale, M/F, $160, nonsmoker. Available late May, 738-0429.

Miscellaneous

JEPPESEN CHARTS: Does anyone want to take over my subscription for the Western U.S.? Betty Berkstresser, ext. 5434.

For Sale: Chest of drawers, $50; 4 dinette chairs, $15/ea; dinette table, $20; bookshelves, $50; bookcases, $30/ea; ottoman, $20; 8" foam pads, $20 ea. Call 734-9040.

Share transportation between Ames and Lawrence Expwy-Tasman Dr. (vic. Lakewood Village, Adobe Wells, Casa de Amigos, Plaza del Rey). Hours 8-4:30. Call Vivian, 5795.

For Sale: Men's 10-spd Centurion bicycle, 23" frame. Finger-tip shifters, 18-34 freewheel, toeclips, speedometer/odometer, headlight and taillight, 90 psi tires w/extra tube. $100. Call 968-8498.

Heavy duty rear shocks to fit Ford F-250 pickup. Lifetime warrantee. Never been out of boxes. Two for $12. (408)356-5648.

Carpool anyone? Will pick up between Ames and near Winchester and Hamilton. 08 to 1630 shift. Room for two more. Call Jim Rogers, ext. 5050.

Co-op student going back to Albuquerque, New Mexico. Looking for rider to share expenses. Leaving June 6, 1979. Call Anthony, 5772.

Color TV: Zenith Chromocolor console, 23", good cond. and picture, $100/offer. 227-2480 after 6:00.

Food preparation machine: New – never used. Precision "La Machine," Elite model 390 with all standard attachments, instructions, and warranty. Retail for $98, asking $75. Call 494-7766 (Palo Alto).

Six dining room chairs, House of Today, $120, 493-9406.

Give away – clear fiberglass and redwood greenhouse, 7x7 ft, 493-9406.

For Sale: 2 tickets "Jesus Christ Superstar," Friday, May 18, San Jose Center of Performing Arts, Grand Tier center. Cost $10 each will sell 2 for $15. Phone 739-2913.

Lost: 1 pair prescription eye glasses. Ames safety type, red-amber frames, bifocal lens. Lost in vicinity of bldg. 213 or 239A on or about April 10, 1979. If found, please call Bud Halt, ext. 6509.

For Sale: 21" black and white Zenith TV chassis. The set works and has good picture tube but needs roll-control tube. $10 or offer. Call 356-2693.

Nikon F2 Photomic Chrome camera, body-mint condition, $450. 948-5602.

To exchange: 2 or 4 tickets to King Tut, Saturday, July 21, 10:00 a.m. for tickets in August or September. McMillan, ext. 5074.

Organ, Hammond Cadette, auto rhythm, dual keyboard, walnut, with bench, good condition. Here's your chance to learn to play a beautiful instrument. $495. 736-0933.

For Sale: Sears 12" radial arm saw with table and dust catcher. 220 VAC, real good condition, $345. 264-8473 evenings.

Would like to car pool vicinity 101 and Tully Rd. Hours 7:30 to 4:00. Vaughn, ext. 5442, M/S 237-5.

For Sale: GM car seat (up to 40 lbs) $15, small tricycle $7, new (unused) Simmons extra firm Beauty Rest queen mattress, with box spring and frame $150. Call 378-0920 after 6 p.m.

I am interested in the possibility of carpooling between Ames and Redwood City. Phone Lelia Coyne, ext. 5968.

General Time Corp. automatic clock thermostat. To directly replace manual wall thermostat using 24V furnace control system. Used 6 mo. Replaced with dual set-back model. $25. (408)356-5648.

Persian cat: White, has papers, needs loving care in good home. Make offer. Call 996-0944.

(Continued on Page 2)

The Astrogram

Admin. Mgt. Building, Phone 965-5422

The Astrogram is an official publication of the Ames Research Center, National Aeronautics and Space Administration, Moffett Field, California, and is published bi-weekly in the interest of Ames employees.

Editor . . . . . Meredith Moore
Associate Editor . . . . Marcia Kadota
Reporters . . . . . NASA Employees

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Ames Research Center
Moffett Field, California 94035

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CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

PREPARED BY:
VISITS COORDINATOR
965-5546 M.S. 253-1

May 28 – MEMORIAL DAY	May 29 –	May 30 – Ames Photo Club monthly meeting Time: 4:45 p.m. Location: N-245, Auditorium	May 31 – Space Science Division Seminar Series Speaker: Dr. Joseph S. Miller, Lick Observatory, U. of CA, Santa Cruz Topic: "BL Lacertae Objects" Time: 3:30 p.m. Location: N-245, Auditorium Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 1 –
June 4 –	June 5 – Ames Scuba Club monthly meeting Time: 11:30 – 1:00 p.m. Location: N-235, Ames Cafeteria Private Dining Room Dues are $5.00 per year and payable to Ames Scuba Club, c/o C. S. Yem, 213-8. For equipment loan to paid-up members, contact Jim Ladner, Ext. 5210 or pager 26-154.	June 6 – Ames Stamp Club meeting Time: 7:30 p.m. Loaction: N-241, room 237	June 7 – Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 8 –
June 11 –	June 12 –	June 13 –	June 14 – Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 15 – If you wish to have an event announced on this calendar please notify Linda Mackey, Visits Coordinator, Ext. 5546, M/S 253-1. The next calendar will cover the period June 11 – June 29. The deadline is May 22.

WEEKEND ACTIVITIES:

June 9th –
ARC Golf Tournament
Laguna Seca
Time: 9:00 a.m.
Chairmen: R. Hedlund and D. Jaynes
Sign up by May 30th

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

MAY 22, THRU MAY 28, 1979

A LA CARTE MENU

TUESDAY
Veal Florentine.....
Baked Cod with Cheese Sauce.....
Creole of Cheddar Cheese Omelette.....
Choice of One: Whipped Potatoes, Rice Pilaf, Harvard Beets, Green Beans or Salad
Soup - Fresh Vegetables.....

WEDNESDAY
Beef Roll Ups.....
Chicken Fried Rice or Omelette.....
Choice of One: French Fried or Whipped Potatoes, Green Peas, Carrots or Salad
Soup - French Onion or Borscht.....

THURSDAY
Salisbury Steak Smothered.....
Hush Puppies & Fish Cakes with Tomato Sauce or Omelette.....
Choice of One: Mashed or Steam Potatoes, Smothered Cabbage, Tomatoes or Salad
Soup - Cream of Corn or Borscht.....

FRIDAY
Ulysses Grant's Leg of Lamb with Dressing.....
Tyler's Seafood Newburg on English Muffin or Omelette.....
Choice of One; Rissole or Whipped Potatoes, Peas, Beets, or Salad
Soup - Clam Chowder.....

MONDAY
MEMORIAL DAY

DAILY SPECIALS
INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

MAY 29, THRU JUNE 6, 1979

A LA CARTE MENU

TUESDAY
Veal Parmesan with Spaghetti.....
Beef Croquettes and Creamed Peas or Omelette.....
Choice of One: Whipped Potatoes, Buttered Spaghetti, Green Beans, Glazed Carrots or Salad
Soup - Cream of Potato.....

WEDNESDAY
Roast Tom Turkey with Dressing and Cranberry Sauce.....
Pork Fried Rice.....
Choice of One: Mashed Potatoes, Candies Yams, Buttered Spinach, Cauliflower or Salad
Soup - Green Split Pea.....

THURSDAY
Turkey Fricasse over Corn Bread.....
Cream Chipped Beef on English Muffin.....
Choice of One: Whipped Potatoes, Candied Yams, Brussel Sprouts, Beets or Salad
Soup - Minestrone.....

FRIDAY
Shrimp Chow Mein and Rice.....
Chicken Tetra zini or Omelette.....
Choice of One: Whipped Potatoes, Rice Pilaf, Zucchini and Tomatoes, Hominy or Salad
Soup - Seafood Gumbo or Borscht.....

MONDAY
Beef Steak Creole Style with Rice.....
Baked Tuna and Noodle Casserole or Omelette.....
Choice of One: Whipped Potatoes, Au Gratin Spinach, Buttered Beets or Salad
Soup - Cream of Chicken.....

DAILY SPECIALS
INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

National Aeronautics and
Space Administration
Ames Research Center
Moffett Field, California 94035 **Special Issue**

NASA

The Astrogram

VOLUME XXI NUMBER 16

May 21, 1979

1979 U.S. Savings Bond Campaign May 7 - June 8

A79-8411-45

Ames Director C. A. Syvertson, Deputy Director A. Tom Young and 1979 Bond Manager Denise Lucy raise the Minute Man Flag in hopes that Ames will win it again this year.

To all employees:

Saving a dollar isn't easy these days, when most of us are trying to stretch our money as far as we can. Before we know it, it seems as if we've gone another week and haven't put anything aside for tomorrow.

But there is a way to stop this. It's simple, safe, and best of all, it's habit forming. The answer is U.S. Savings Bonds, through payroll savings. Before you see it, your allotment is saved for you – every payday – and, best of all, you can start very modestly or with as much as you want.

Last year, almost $8 billion in Savings Bonds were sold – the greatest peacetime sales on record. One third of all the households in the nation now own Savings Bonds.

Won't you join them and me in signing up or increasing your allotment. All it takes is one signature. When one of your co-workers asks you during the campaign, say 'yes' to yourself, to your country, and to your future.

Sincerely,
Denise Lucy
Denise Lucy
1979 U.S. Savings Bonds Campaign Manager

Savings bonds rates of interest to rise to 6.5% on June 1

By a WALL STREET JOURNAL *Staff Reporter*

WASHINGTON – In an effort to spur sales of savings bonds, President Carter decided to boost interest rates on them to 6.5% a year from 6%.

The increased rate is effective June 1 for new bonds and for the remaining life of old bonds.

"The 6.5% interest rate, coupled with the tax advantages available to savings bond owners, represents a fair return and makes the bonds more attractive as a long-term investment," said Azie Taylor Morton, U.S. treasurer, in a statement.

The interest on the bonds is free of state and local taxes. Federal taxes on the bonds needn't be paid until they are cashed in.

NASA Administrator's message

NASA Administrator Dr. Robert A. Frosch in his letter of April 26 stated, "The annual U.S. Savings Bonds Campaign for NASA employees will be conducted from May 7, 1979, through June 8, 1979. This important employee savings program has my full support.

"During the campaign, a savings bonds canvasser will meet with you, explain the merits of buying and retaining savings bonds and will ask if you would like to join the bond payroll savings plan or to increase your present allotment. When deciding what action to take, remember that the payroll savings plan provides a guaranteed way to save money, and as savings grow into substantial reserves, a solid base is formed upon which future financial planning can develop." Signed Robt. A. Frosch.

Center Director confirms support

ARC Center Director C. A. Syvertson in supporting the 1979 U.S. Savings Bond Campaign, said, "In the past few years Ames employees have enthusiastically supported the Savings Bond program. Participation by Ames employees has increased from 70% in 1977 to 80.5% at the end of the 1978 campaign. I was justly proud of all those who helped us reach this level and ask for your continued support and participation again this year. Because of this high level of participation, Ames has proudly flown the Minuteman Flag presented to those organizations that achieve over 75% participation. The goal we have set for this year is to surpass last year's level of 80.5% and reach 85%. I feel this is an attainable goal, especially since other Centers such as KSC reached 93.9% in 1978, Langley 86.1%, and Dryden and NSTL 85.7%. We can do as well in supporting a program that invests in our future and the future of our country and Ames Research Center."

Tax advantages of Series E Savings Bonds

Series E Savings Bonds have a tax-deferral feature which makes them attractive to many investors. Not only can the investor use this feature to report income tax liability on accumulated interest at the most advantageous time for him, but he also may accumulate interest on the amount of interest which, if the interest were normally taxable, would have been taxed away.

The following table shows what rate of interest an investor would have to earn on other taxable savings to equal the 6% paid on E Bonds. This table assumes the filing of a joint return with two dependents and assumes that the state tax on income is used as an itemized deduction and further assumes no income other than W-2 wages.

W-2 Wages	Federal Tax Rate	State Tax Rate	Equivalent Taxable Interest Rate
$12,000	19%	4%	7.72%
16,000	22	5	8.10
20,000	25	6	8.51
24,000	28	8	9.06
28,000	32	9	9.70
32,000	36	10	10.42
36,000	39	11	11.05
40,000	42	11	11.62

Prepared by PG&E Company

Bargains, budgets and bonds

These days, when the average American spends more than he makes, it takes proper planning to cut back on spending, hunt for bargains, and shop for value. If you are looking for a better way to cope, try timing buying trips for off-season sales.

Garden equipment is least expensive during August and September, while air conditioners become a bargain in January and February. You will find the best prices in winter fabrics during March, and summer fabrics are priced lowest in October and November. Look for summer bargains after Labor Day, and shop for winter clothing after Easter.

When the new cars come out in October, you will find good prices on last year's models. Used cars become better buys in November and December, because they are marked down for the new-car season.

It is best to shop your Christmas list in January or February. You also avoid high Christmas prices and last-minute rushes by keeping your eyes open for special values all through the year. Do the same for birthdays and anniversaries. You will be prepared for any gift-giving occasion, while lightening the load on your budget.

A family budget should squeeze more from each dollar by spotting your spending patterns. Begin a budget by gathering all records of income and expenses for the past several months. Haul out your checkbook stubs, credit cards, and cash receipts. Find where your money comes from and where it goes. Note how much and how often.

Take a sheet of paper and make a column for "income." Count your net salary and any other constant earnings, then divide by 12 for a monthly figure.

In another column, label your unchanging monthly obligations "fixed expenses." These should be constant items like rent, taxes, bills, and insurance payments.

You will have more control in your "flexible expenses" column. These should be things that can be pared or altered, like utilities and car costs. Do not try to project your flexible expenses more than three months ahead. But do plan for vacation and holiday travel. And do not forget those year-around gifts.

Now look at your savings. Are you saving for education and retirement? How about emergencies – those unplanned budget blowouts?

U.S. Savings Bonds

Series E

- earn 6½% interest when held to maturity of five years (4½% the first year)
- are exempt from state and local income and property taxes
- are guaranteed safe – replaced if lost, stolen or destroyed. (keeping a record of serial numbers helps speed replacement)
- are available in eight denominations ranging from $25 to $10,000 to suit any savings program or gift situation

Series H

- earn 6½% when held to maturity of 10 years (5% the first year)
- provide current income by semiannual Treasury check
- may be purchased in exchange for Series E Bonds/Savings Notes with continuation of tax deferral on accrued interest

The 1979 U.S. Savings Bond Campaign [illegible] sign up today [illegible]

A79-0411-

Basic facts about Se

The Series E Bond is an appreciation-type security that is purchased at a cost of 75 percent of face amount. Denominations, face amount, available are – $25, $50, $75, $100, $200, $500, $1,000, and $10,000.

- ★ **SAFE/INDESTRUCTIBLE** – Savings Bonds are backed by the full faith and credit of the federal government. If lost, stolen, mutilated or destroyed, they will be replaced free – and bearing original issue date.
- ★ **GUARANTEED RATE** – The interest rate is guaranteed to maturity or extended maturity. The rate is 6.5 percent, compounded semiannually, when held to five-year maturity. The rate is 4.5 percent the first year; thereafter, it increases gradually, raising the yield to 6.5 percent from issue date to maturity. Bonds bearing issue dates prior to December 1, 1973, have had their yields increased by one percent.
- ★ **EXTENSION PRIVILEGE** – Savings Bonds carry an automatic 10-year extension beyond original maturity. Older E Bonds have been granted one or more 10-year extensions, so that all outstanding E Bonds are still earning interest. The rate, during extension, is the rate prevailing for new issues at the time the Bonds enter an extension, and is guaranteed to next maturity.
- ★ **EASY TO BUY** – The Payroll Savings Plan permits Savings Bonds to be purchased on a partial-payment plan. Bonds may also be purchased regularly at banks through the Bond-A-Month Plan. In addition, Bonds may be purchased over the counter as gifts at most financial institutions.
- ★ **EASY TO REDEEM** – An E Bond may be cashed at any time beginning two months after date of issue.

■presentatives: find your representative and ■ 6.5% bonds

■ries E Savings Bonds

- ★ **TAX BENEFITS** – Federal income-tax liability may be deferred until E Bonds are redeemed or reach final maturity. Bonds are exempt from state and local income or personal property taxes.
- ★ **EXCHANGE PRIVILEGE** – E Bonds may be exchanged – in amounts with a redemption value of $500 or more – for current-income Series H Bonds, which pay interest by Treasury check every six months. The yield on H Bonds averages 6.5 percent, when held to 10-year maturity. (U.S. Savings Notes – Freedom Shares – may also be exchanged for H Bonds.) Federal income-tax liability, on accrued interest of Bonds/Notes offered in exchange, may continue to be deferred until H Bonds are redeemed or reach final maturity.
- ★ **CHOICE OF REGISTRATION** – Bonds may only be issued in the name of one person, in the names of two persons, as coowners, or in the name of one person, as owner, with a second person as beneficiary (payable on death).
- ★ **NO PROBATE** – Savings Bonds issued with a surviving coowner or beneficiary do not form a part of an estate for probate purposes. However, their value must usually be included in computing the gross estate for estate-tax and inheritance-tax purposes.
- ★ **NO MARKET WORRIES** – There's no need to refer to the financial pages to see whether Savings Bonds are up or down. Interest accrues at a fixed rate at stated intervals.

Sing a song of saving

We are not going to ask you to hum the Star-Spangled Banner as you sign up for the Payroll Savings Plan. But U.S. Savings Bonds are really something to sing about. They do so much for you.

U.S. Savings Bonds are full of advantages for the individual saver. And you do not have to wait forever for your money. Sizeable savings take a while to accumulate, but Bonds now mature faster than ever, five years to be exact. So while Bonds are ideal for long-range plans, they also work for your short-term goals.

And their interest rate is nothing to scoff at. E Bonds yield a healthy 6½ percent interest when held to maturity, 4½ percent the first year. But remember, there is a 10-year extension privilege beyond maturity – for continued earning.

You also have options with taxes. First of all, U.S. Savings Bond interest is exempt from all state and local taxes. With federal income tax, you may choose to defer reporting your interest until the Bonds are redeemed or reach final maturity – whichever comes first. And if you are building funds for education or retirement, you have some special tax-saving opportunities that are worth looking into.

Bonds are safe from bad luck, bad memory, and bad guys. They are replaced if destroyed, lost or stolen. And at no cost to you.

Quotable quotes

"My major argument is that this is a form of 'forced savings,' and that by small payroll deductions regularly, you can build a sizable nest egg over a period. I also believe that it is far better for you to earn a mediocre return on 'something' than to be able to earn a spectacular return on 'nothing'." Sylvia Porter.

"Many individuals have found value in the 'enforced savings' method of buying E bonds by payroll deduction, an accommodation provided by employers. This, like most other payroll-savings plans, has proved to be a painless and popular savings device." The New York Times Guide to Personal Finance.

"There is no form of saving any safer than Series E or H U.S. Savings Bonds. They are not merely insured by an agency of the federal government, they have the government fully behind them. They are virtually riskless." The Dollar Squeeze and How to Beat It by George Sullivan.

Savings Bonds finance over 15% of the privately held section of the national debt. Savings bonds allow our government to raise money without contributing to inflation.

Changes to Series E Savings Bonds

The U.S. Treasury has announced changes in Series E savings bonds scheduled to begin for bonds purchased after January 1, 1980. The new bonds will be called Series EE. Payroll sales of Series E bonds will be phased out during the first 6 months of 1980 and new applications for Series EE bonds will be needed by the Payroll Office.

The new Series EE bonds may be purchased with a face value of $50 and higher denominations. The issue price will be 50% of the face value. The EE bonds will continue to earn 6½% when held to maturity which will be 11 years and 9 months after purchase. Outlined below is a comparison of terms and conditions between Series E bonds and Series EE bonds. This change will in no way affect purchase of Series E bonds during 1979.

Savings bond interest boosted

President Carter has authorized the government to boost the interest rates paid on series E and H savings bonds to 6½ percent to make them more attractive to investors, it was announced recently.

The increase – which will take effect June 1 – was the first since December 1973, when rates were raised from 5½ percent to the current 6 percent level.

Treasury Secretary W. Michael Blumenthal, who announced Carter's decision, said the interest rate increase "will benefit" holders of about $81 billion in outstanding bonds and notes.

The increase, he said, will be automatic and require no action by holders of government bonds.

Blumenthal said the rate on the recently announced series EE and HH bonds, which will go on sale in January 1980, will also be increased to 6½ percent.

Comparison of terms and conditions of Series E and Series EE accrual-type savings bonds

	Series E Bands	Series EE Bonds
Offering Date	Close over-the-counter sales December 31, 1979; close payroll sales June 30, 1980	Begin January 2, 1980; phase in payroll sales through June 30, 1980
Denominations	$25, $50, $75, $100, $200, $500, $1,000, $10,000	$50, $75, $100, $200, $500, $1,000, $5,000, $10,000
Issue Price	75% of face amount	50% of face amount
Maturity	5 years with guaranteed 20-year extension	11 years and 9 months
Interest	Accrues through periodic increases in redemption value to maturity	Same
Yield Curve	4% after 2 months, 4.5% first year, increases gradually thereafter to yield 6½% if held 5 years	4% after 2 months, 4.5% first year, increases gradually thereafter to yield 6½% if held 5 or more years
Retention Period	Redeemable any time after 2 months from issue date	Redeemable any time after 6 months from issue date
Annual Limitation	$7,500 issue price	$15,000 issue price
Tax Status	Accruals subject to Federal income and to estate, inheritance and gift taxes – Federal and state – but exempt from all other state and local taxes. Federal income tax may be reported (1) as it accrues, or (2) in year bond matures, is redeemed or otherwise disposed.	Same
Registration	In names of individuals in single, coownership or beneficiary form; in names of fiduciaries or organizations in single ownership only.	Same
Transferability	Not eligible for transfer or pledge as collateral	Same
Rights of Owners	Coownership: either owner may redeem, both must join reissue request. Beneficiary: only owner may redeem during lifetime; both must join reissue request.	Coownership: same Beneficiary: Same except that consent of beneficiary to reissue not required
Exchange Privilege	Eligible, alone or with savings notes, for exhange for Series H bonds in multiples of $500, with tax deferral privilege.	Eligible, alone or with Series E bonds or savings notes, for exchange for Series HH bonds in multiples of $500, with tax deferral privilege.

Conversion of E bonds to future HH bonds

Series E Bonds and Savings Notes can be converted to the new Series HH Bonds after the HH Bonds go on sale January 2, 1980. *The conversion must be made within one year of final maturity of the E Bond*, i.e., an E Bond reaching final maturity in May of 1981 must be converted to an HH Bond on or before May of 1982.

Conversion of E to HH Bonds allows the bondholder to continue to defer reporting of interest earned on the E Bonds for federal income tax purposes. The amount of deferred interest will be entered on the face of the new HH Bond, and when the HH Bond is cashed or finally matures, the holder must report the amount of deferred tax on his federal income tax return for that year.

Tax deferral applies only to interest earned on Series E Bonds or Savings Notes. Interest earned on your Series HH Bond is reported for federal income tax purposes the year it is earned.

HH Bonds have a maturity of 10 years. Series H bonds cannot be converted to HH Bonds.

Answers to inquiries

Question: What happens to the E and H Savings Bonds I'm buying this year (1979) when the new EE and HH bonds go on the market in 1980? Must I cash in my E and H bonds in 1980?

Answer: NO! E bonds you buy in 1979 earn interest for a total of 25 years (5 years to original maturity plus 20 years extension). H bonds you buy in 1979 earn interest for a total of 30 years (10 years to maturity plus a 20 year extension). So – 1979 E bonds will earn interest until the year 2004; 1979 H bonds will earn interest until 2009.

Question: The present Series E U.S. Savings Bonds will be replaced by a new Series EE Savings Bond on January 2, 1980. How will this affect the E Bonds I buy now through the end of 1979?

Answer: No effect at all. Any E Bonds you buy while they remain on sale (through December 31, 1979) will continue to have the regular conditions for E Bonds. That is: Your E Bonds will continue to be exempt from state and local income taxes, and federal tax can be deferred until the bonds are cashed, disposed of or reach final maturity.

Question: Can I – or must I – turn in my present E Bonds for the new EE Bonds that go on sale in 1980?

Answer: No. In fact, you *cannot* turn in E Bonds for EE Bonds. There would not be much point to it, since both earn interest at the same rate.

Question: Do I have to cash in my older Series E bonds after 40 years?

Answer: You do not *have* to cash them in, but it is highly desirable since the bond stops drawing interest after that and you will be liable for payment of any deferred federal income tax on the interest. It is advisable either: (a) to cash the bonds at a bank or other savings institution which redeems Savings Bonds, or (b) to exchange them (in 1980 or later) for Series HH Savings Bonds, and receive twice-yearly interest checks. You can continue to defer reporting the interest earned on your E bond (now converted to an HH bond) but the interest you begin to earn on your HH bond is reportable, for income tax purposes, in the year that you earn it.

Question: I understand that Series E Savings Bonds bought between 1941 and April 1952 stop earning interest soon. When does this happen?

Answer: Not for awhile. Series E Savings Bonds issued between 1941 and April 1952 continue to receive interest for 40 years after purchase. After 40 years they reach final maturity and stop drawing interest. This means, for example, that E bonds issued (bought) in May 1941 still draw interest until May 1981, for a total of 40 years. E bonds issued in May 1942 earn interest until May 1982. E bonds issued in May 1943 earn interest until May 1983. E bonds issued in May 1944 earn interest until May 1984. E bonds issued in May 1945 earn interest until May 1985. And the same is true for bonds bought in 1946, 1947, 1948, 1949, 1950, 1951 and up to April 1952. *All E bonds bought between 1941 and April 1952 keep earning interest for 40 years after they were issued. The issue date (year and month) is marked on each bond.*

Facts and figures about product values

You can earn 6½-percent interest on every U.S. Savings Bond you buy. Just hold your Bonds to maturity of 5 years. Your older Series E and H Bonds benefit from the improved rate, too.

• • •

Series E and H Savings Bonds now on sale receive a 6½% interest when held to maturity. Older Bonds also benefit from the improved yield.

• • •

National Aeronautics and
Space Administration
Ames Research Center
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NASA

The Astrogram

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Ames' Galileo II studies monsoon

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The Ames Galileo II research aircraft will participate in a summer-long international study of the summer monsoon, the tropical wind pattern which annually brings torrential rains to the Asian subcontinent.

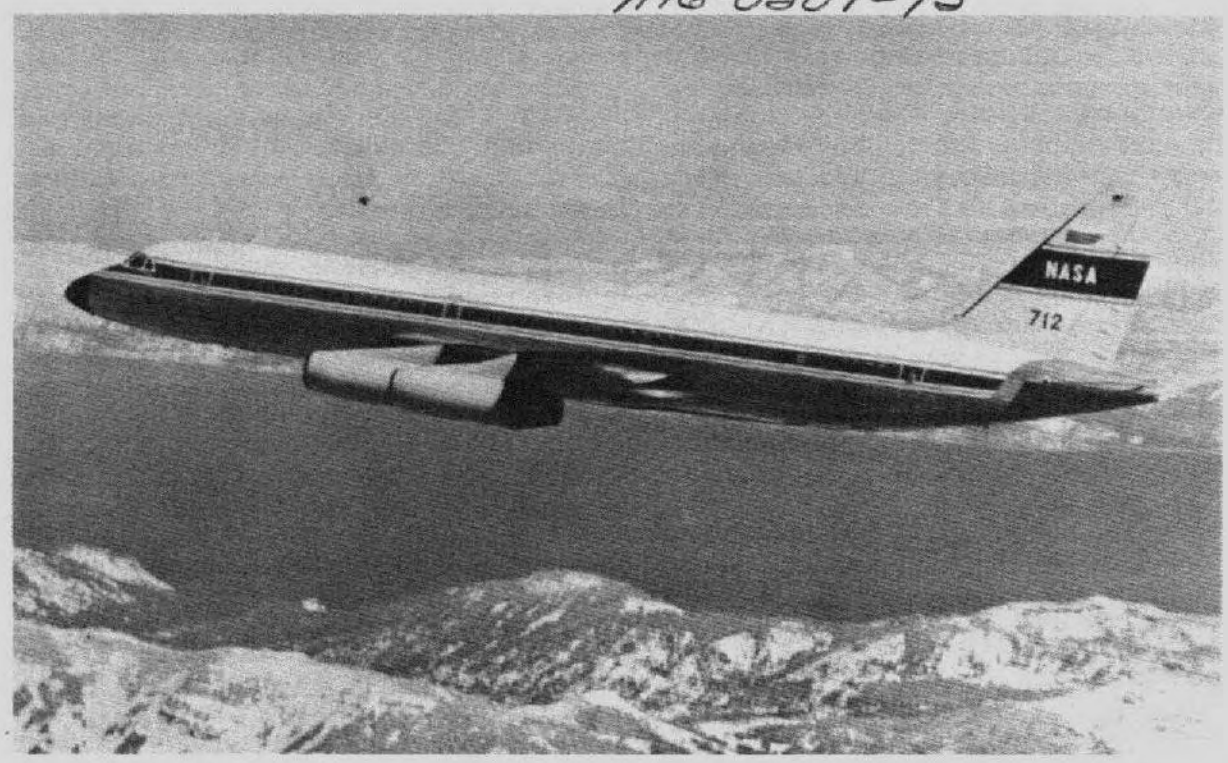
The monsoon, which brings nearly 100 percent of annual rainfall to the subcontinent during the months of June, July, and August, is a mixed blessing. The downpours furnish needed moisture for crops which feed hundreds of millions of people. Occasionally, when the rains fail, millions face death by starvation. But the heavy rains wreak havoc as swollen rivers and streams spread over the surrounding communities. Last year more than 900 people died in the monsoon floods and more than three million were left homeless.

The study, called MONEX (for monsoon experiment), is an international effort to explore the origin of the monsoon winds in order to improve short-range predictions of monsoons, monsoon rainfall and related events, and to better understand the role of monsoons in global weather patterns.

The Galileo II, a four-jet Convair 990 research aircraft, will operate from bases in Saudi Arabia and elsewhere in the region during the months of May and June. Its activities will be coordinated with those of several other aircraft, ships, and a variety of ground-based facilities including self-recording surface stations, portable radiosondes and digital radars.

These intense measurements over a 73-million square kilometer (28-million square miles) area will form a part of an even larger-scale global atmospheric research program being conducted by the World Meteorological Organization of the UN.

According to Joachim Kuettner, Director for the U.S. MONEX participation, the data gained will add to the global effort, and the global experiment will provide background information on a global scale. "MONEX will go a long way toward improving our ability to predict the regional monsoons and make a major advance in weather prediction in southwest Asia. This area is practically devoid of basic weather data, so that predictions of even a day or two in advance would be extremely useful," Kuettner says.



Galileo II arrived in Dhahran, Saudi Arabia, on May 3 and will conduct research flights from Dhahran and other locations through July 3. The aircraft will return to California via the Far East and Alaska, completing a circumnavigation of the world.

A variety of instruments have been installed aboard Galileo II for the MONEX mission. These instruments will measure density, temperature, pressure and humidity of the atmosphere, the chemical composition of aerosols, and concentrations of carbon monoxide and various atmospheric trace gases.

Other instruments will measure radiation budget, ultraviolet sky radiance, relative temperatures at the surface, and the atmospheric electric field. Various camera systems will record cloud formations.

Galileo II is operated by Ames as a flying laboratory capable of carrying scientific payloads to altitudes of up to 12,500 meters (41,000 feet). The aircraft provides experimenters with a stable platform from which they can conduct studies in aerodynamics, earth resources, mapping, oceanography, polar ice fields, meteorology, stratospheric and ionospheric physics, astronomy, geophysics, aurora and airglow, and life sciences. It has also been used as a platform to simulate future operations of Spacelab.

Ames takes steps to conserve energy

Ames Director C. A. Syvertson has announced that NASA Headquarters is asking that each Center, in compliance with a Presidential Directive, reduce use of automotive fuels by 10%. A review of Ames records shows that ARC can make a major savings by eliminating most of the trips made to airports by privately owned vehicles (POV). Although traveling for the Federal Government already involves personal sacrifice and inconvenient scheduling, I am asking for your further cooperation in making full use of the limousine service available in this area.

The limousines are to be used for transportation to the air terminal when departing on temporary duty travel from the San Jose or San Francisco Airports. For those Ames travelers who so desire, in lieu of limousine they may use buses or a combination of train and bus to the bay area air terminals. Bus and train schedules are available in the Ames Travel Reservations Office. Use of POV will be prohibited unless cleared by the Travel Reservations Office after they have determined that a limousine is not available. When travel vouchers are processed for reimbursement, mileage allowance will not be paid if a POV was used without the clearance of the Travel Reservations Office. You are reminded that receipts are required for limousine service and are to be submitted with your travel vouchers.

In addition, Ames will also comply with the President's directive requiring 5% reduction in agency energy use. Building thermostats will be set at not more than 65 degrees during working hours for the heating season and not less than 80 degrees for the cooling season. Verlin Reed, Chief of Ames Institutional Operations Office, asks that employees be thoroughly aware of the energy cutback and dress accordingly at all times.

New food truck schedule

Bldg.	A.M.	Noon	P.M.
241	8:45	10:50	1:45
201	8:50	11:00	1:50
233	8:55	11:05	1:55
255	9:10	11:10	2:20
245	—	11:15	—
228	—	11:25	—
226	9:58	11:30	2:00
244	9:40	11:45	2:10
246	9:00	11:35	2:05
211	9:03	11:38	2:07
251	9:05	—	—
255	9:10	—	2:20
144 door 19	9:30*	12:00*	—
144 door 5	9:35	—	—
238	9:50	—	2:15
234	9:53	—	—

*Time Stop: You may or not desire to use this notation.

1979 Director's Center Address

It is customary for the Director to report to the staff annually of the status of the Center and to give some of his views on the future. Today, I plan to review for you some of the things Ames has accomplished in the past year or so, to discuss the future as well as the Center goals and objectives as I see them currently, to cite the major challenges and problems we face in the coming year, to outline a change in overall emphasis I believe is important, and finally to entertain questions.

Before I start, I would like to review how Ames got to where it is today. I believe this review is helpful both for our new employees and for those who may have forgotten the Center's history.

In the late thirties when the site for the Ames Research Center was being chosen, the selection criteria used included three elements: the proximity of major universities, availability of low-cost electrical power, and the existence of good flying weather. The south end of San Francisco Bay, where we are located, has continued to satisfy all of these criteria over the years since the Center was established in 1940. At present, there are some 44 institutions of higher learning in the Bay Area. Although rates have increased significantly from what they were in 1940, electrical power costs have remained low relative to other areas, about half those in most parts of the country. The weather remains excellent with a high percentage of clear days, moderate winds, and mild temperatures – all important characteristics for flight operations.

The intellectual climate created by the nearby colleges and universities has been important to Ames' ability to attract and retain exceptionally highly qualified staff. Today, the Ames staff has the highest percentage of advanced degrees of any Center in NASA. Ames employees have also received many honors and extensive recognition for their work both from NASA itself and from various professional societies.

The creativity of the Ames staff has evidenced itself in a variety of ways, not the least of which has been the conception and design of important research facilities, many of which are unique in the world. In addition, the continued availability of ample electrical power at moderate cost made it practical to construct relatively large and powerful facilities. As a result, Ames' facilities – computers, wind tunnels, simulators, research aircraft, ARC jets, and special purpose laboratories – are among the finest and most modern existing in the world today.

The combination of highly qualified staff and unmatched facilities has permitted Ames to play an important part in many of NASA's programs in aeronautics and space, especially in the area of aerodynamics, flight mechanics, planetary atmospheres, and life sciences. Ames also uses its capabilities to support other parts of NASA, other agencies and industry. This support function is exceedingly important. Not only does it recognize an obligation the Center clearly must honor, but these close contacts with our constituency help shape our own programs to satisfy better the true needs of the country.

The past year or so has been an exceptionally busy one for Ames. We have seen some major events which were the culmination of many years of work and we have seen others that mark the beginning of important new areas of research. Let me cite just a few of these events.

It was just a year ago yesterday, May 20, 1978, that the Pioneer Venus Orbiter was launched. The orbiter was followed by its multiprobe sistership launched on August 8. They arrived at Venus on December 4 and 9, respectively. The multiprobe was exceptionally successful with one of the small probes surviving for more than an hour on the surface. The orbiter was also highly successful and continues to send back data; and it will continue to do so for some months to come. The fleet of Pioneer Venus spacecraft has given us much new information about the planet, much of it from Ames experiments. In recognition of this highly successful mission, the National Space Club awarded the project team the Nelson P. Jackson Award and named the project manager, Charlie Hall, astronautics engineer of the year.

While I am on the subject of awards, let me mention a few more. Al Seiff received the exceptional scientific achievement medal; Greg Condon, Don de Vincenzi, Lionel Levy, Ken Orloff, and Sam White received the Exceptional Service Medal; the QSRA and the Cosmos 936 teams received Group Achievement Awards; Dallas Denery received the Dryden Fellowship, and Dean Chapman the Dryden Lectureship; Jim Pollack received the Space Science Award from the AIAA; Len Roberts was elected a fellow and R. T. Jones an honorary fellow of the AIAA; Lionel Levy received the H. Julian Allen Award; R. T. Jones the Prandtl Ring from the German equivalent of the AIAA; Dean Chapman served as the Hunsaker professor at MIT last fall; Heinz Erzberger received an award from the IEEE for outstanding achievement in control engineering; and Dave Chappell received the American Helicopter Society's Lichten Award. Dee O'Hara was recently made an honorary member of the Society of NASA Flight Surgeons of the Aerospace Medical Association. The Federal Executive Board in San Francisco recognized the contributions of Vera Buescher, Jim Lawless, Ed Devine and Marnell Smith; and Carol Barrie, Kitty Haugh and Louise Mahaffie received secretary awards here at the Center. That is an impressive list for one year and shows again the caliber of people who work here at Ames.

Just about one month ago, on April 23, the second tilt-rotor research aircraft made its first flight. Since then more than a dozen flights have been made to expand the aircraft's flight envelope. The tilt-rotor has performed well and the measured flight data have followed predictions closely.

In August last year the quiet short-haul research aircraft (QSRA) was delivered to Ames following a first flight at Boeing on July 6. Since its arrival at Ames, the QSRA has completed the first phase of its flight test program and now has been modified slightly to study a different leading edge configuration. The aircraft has met or exceeded all of its performance goals. I believe it is a model for project management as well; the contract underran by about $2 million out of the $20 million estimated cost, which is certainly not a common occurence in today's environment.

Ames has continued its support of the space shuttle program in several areas – computational fluid dynamics, wind tunnel testing, flight simulation, and thermal protection. Most of the materials in the shuttle TPS were developed here at Ames and newer materials are presently being developed which represent significantly improved performance and durability and which will most likely be applied to the second orbiter.

In studies related to the origin of life, a property of common metal clays was discovered that shows how these clays can concentrate the building blocks of life and selectively destroy certain amino acids which are absent in present-day organisms.

The aviation safety reporting system contributed to the safety of aircraft operations by issuing about 575 early warnings of problems and potential hazards. Nearly 17,000 reports have been received to date; these reports show clearly that about 80 percent of all aircraft incidents (as well as accidents) have a human factor aspect to them.

Flight testing and analysis at Ames made significant contributions to the U.S. National Microwave Landing System (MLS) and were critical in the ICAO choice of the sytem as an international standard.

We also completed a highly successful investigation of helicopter IFR approaches to offshore oil rigs.

Last but not least, after over 20 years of trying, we finally got our new warehouse which was commissioned a few months ago.

I believe the year has also seen an improvement in our relations with other installations especially Headquarters, Langley, and Dryden, and I am pleased with the cooperative arrangements with these organizations and with some of our sister agencies: the Army, the FAA, the Navy, and the Air Force.

The foregoing accomplishments were clearly important, but a better perspective of the overall scope of the Center's contributions can be obtained by consideration of our main products, scientific and technical reports. For example, in FY 1978, the professional staff published about 550 NASA reports, journal papers, and society papers (in addition to a large number of contractor reports). The subjects of these papers covered a diversity of scientific and technical specialities representative of Ames programs from biology to helicopters.

One other accomplishment of the Center is also worthy of attention. Ames has evolved a management style which permits the Center to carry out major programs with relatively modest sized organizations. For example, the peak staffing for the highly successful Pioneer-Venus project was only 70 civil servants (plus 31 support service contractors). The Center also has evolved a variety of programs to bring students and faculty into the Center and they not only make many direct contributions to Center programs but provide stimulation to the research activities that aid in maintaining the Center's vitality. Through this mechanism, Ames also contributes directly to the educational process for the next generation of scientists and engineers in whose hands will fall the future of science and technology in the United States.

The coming year will show no easing off: in fact, the pace will undoubtedly quicken. Pioneer 11 reaches Saturn on September 1, after a journey of 6½ years and about 2.5 billion miles, the Galileo and IRAS projects will reach peak activity. We have another series of life science experiments scheduled to fly on a new Russian Cosmos as well as others scheduled for Spacelab. We also have a new series of bed-rest studies starting in a few weeks which also will be conducted jointly with the Russians. Major construction work will start on the 40- × 80-foot wind tunnel. The vertical motion simulator will come on line. We have hopes of obtaining approval for several new facilities including one for our aeronautical human factors program. Work will continue on the design of the numerical aerodynamic simulation facility. The tilt rotor, RSRA, and QSRA will all be in active flight status as will all of our fleet of scientific aircraft. The demand for test time in our facilities is growing again with one facility, the 11-foot, being forced to three-shift, seven-day a week operation. Overall, our total budget for FY 1979 is $250 million, our second largest ever, even when account is taken of inflation. Our problem is clearly to keep our head above water.

With all of the work facing us in the coming year it is especially important that we continue to examine the directions in which we are headed. For this reason I would like now to turn to the subject of goals and objectives for Ames. Our one key goal can be stated as "to contribute to the nation's world leadership in aeronautics, space, and related fields." The Center contributes with research, technology programs and flight projects, the products of which advance both civil and military aeronautics, space sciences, and space applications.

This one overall goal can be subdivided into a family of reasonably concise goal statements which

(Continued on Page 3)

Director's report

(Continued from Page 2)

cover the major activities of the Center. As viewed in 1979 these goals are:

- Advance the technologies important to the nation's leadership in aeronautics with emphasis on short-haul aircraft (including rotorcraft and VSTOL), theoretical and experimental aerodynamics, computational fluid dynamics, and human factors.
- Contribute to the exploration of the solar system and to the understanding of the universe and its evolution with emphasis on planetary atmospheres, infrared astronomy and extraterrestrial biology.
- Provide technology to support NASA space missions led by other Centers with emphasis on atmospheric entry, thermal protection, and space biomedicine.
- Support the aeronautics programs of NASA, other agencies, and industry through the effective use of Ames expertise and unique facilities.
- Effect the transfer of aeronautics and space technology to state and local governments and to industry for a broad spectrum of applications to the benefit of society.
- Maintain competent, creative, and responsive research and support staffs, increase the representation and participation of minorities and females, and provide educational and career growth opportunities for all deserving employees.
- Design, develop, and operate unique and high performance research facilities including special purpose computers, wind tunnels, flight simulators, research aircraft, and research laboratories.
- Conduct assigned programs and operate center facilities in a manner to make the most efficient use of manpower and funding and to assure conservation of natural resources and environmental compatibility with the community.

The goals I have just described tend to be general in nature and lacking in specific measures of accomplishment. However, more quantifiable objectives can be developed working from these goals. In fact, we have drafted a set of specific objectives corresponding to some of the major programs at the Center such as ones for helicopter technology, V/STOL technology, computational fluid dynamics, aeronautical human factors, planetary atmospheres, space biomedicine, infrared astronomy, western regional applications program, research facility projects, equal opportunity program, and the procurement process. It would take too much time to discuss each objective here. A document describing all of the Center's goals and objectives has been drafted and hopefully will be ready for distribution in the next month or two. It is also planned to develop corresponding documents for each directorate and possibly for subordinate organizations too.

In reviewing the Center objectives it is clear that the majority of them pertain to the project side of our business. This is understandable since it is far easier to define specific quantifiable targets for a project than for research. That does not mean research is less important, it is clearly very important to our future.

While Ames carries out its projects with relatively small staff, the need to meet project schedules and cost controls often results in unalterable and inflexible manpower commitments. Operation of our major facilities represents a similar and much larger manpower load. In view of the importance of our facilities, we have little choice but to use them to support major national programs. One can ask if anyone is left to do research. In too many cases, the answer is no, or at least not enough. I believe it is true that the research side of our activities at Ames has been cut back too far and must be strengthened over the next several years if the Center is going to continue to make useful contributions. The question is how to accomplish that strengthening since clearly we have a major problem with manpower.

Ames fared as well as any center in the last NASA complement decisions and I believe Headquarters is convinced we have a significant manpower shortage. The difficulty is that Headquarters does not have the wherewithall to help. I do not believe we will see any measurable manpower relief in the foreseeable future. We will have no choice but to solve our own problems, and there are only two possibilities – one, cut back on our own program commitments and two, find innovative ways to augment our research staffs. We will have to do both if we are to raise research activities at Ames to the level which is necessary to retain our hard-won reputation for excellence in research.

I consider the foregoing to be the major management challenge for the coming year: namely, to trim back our commitments where appropriate, to make certain we honor those that are retained, and to find new ways to augment and stimulate our research programs. We are exploring some new ideas now. Hopefully, next year I will be able to report some progress toward increasing Ames research efforts.

But whether we are successful in expanding research or not, we all face a very busy year. By now, however, I expect you are all used to that or else you wouldn't still be at Ames.

In ending I would like to cite one other accomplishment of the past year which I believe foretells well for Ames future; that, of course, is Ames has acquired a new Deputy Director. I know all of you will join with me in welcoming Tom to Ames. He has been a great help to the Center in the few months he has been here and I am sure many more of you will be relying on him in the future as I have already learned to do.

Appointment of Dr. Mutch

Dr. Thomas A. Mutch is to be appointed the Associate Administrator for Space Science effective July 1, 1979.

Dr. Mutch, Professor of Geological Sciences at Brown University, Providence, Rhode Island, has been associated with Brown University in numerous capacities since 1960. He has served as the Associate Dean of the Graduate School and as the Chairman of the Department of Geological Sciences.

Dr. Mutch has been a major contributor to NASA science programs since 1969 as a member of the Lunar Science Review Board from 1969 to 1973, as leader of the Lander Imaging Science Team for the Viking Project (1969–1977), as chairman of several NASA committees planning the post-Viking exploration of Mars, as co-chairman of the Second International Colloquium on Mars which was held at the California Institute of Technology in January of this year, and as a scientific investigator.

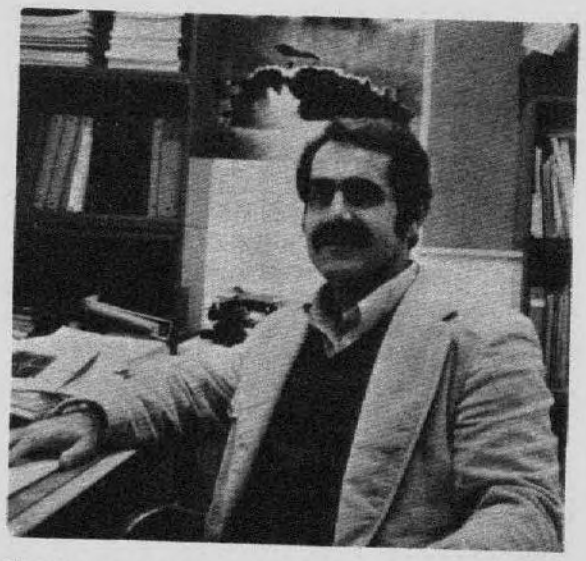
He has served as an invited lecturer at many universities and professional societies and has published extensively in his field. He was named a Fellow of the Geological Society of America in 1973. He received the NASA Medal for Exceptional Scientific Achievement, 1977, and NASA Group Achievement Awards for lunar science, Viking science, and the Viking Undergraduate Intern Program. In 1977 he shared with all other Viking scientists the AAAS Cleveland-Newcomb Award for the best paper in *Science* for that year.

Born on August 26, 1931, he graduated from Princeton University in 1952 with an A.B. in history. He earned his M.S. in geology in 1957 from Rutgers University and his Ph.D. in geology in 1960 from Princeton. He is a member of the Geological Society of America, Sigma Xi, and the AAAS. He is a long-time mountain climber and has visited the Himalayas twice, most recently during the summer of 1978 with a group of Brown University students and staff.

Don Ciffone selected AIAA distinguished lecturer

Don Ciffone of the Helicopter Technology Division Office has been selected by the American Institute of Aeronautics and Astronautics (AIAA) to participate in its 1979-80 AIAA Distinguished Lecture Program. This program was begin in 1969 to provide excellent speakers on a variety of topics for AIAA Section Meetings, particularly those in the fewer traveled parts of the country. The Lecture Program runs from September 1979 through June 1980 and is coordinated and administered by the AIAA New York Office which pays all of the travel expenses. The only other NASA member to share this honor with Don for this coming year is Dr. Chris Kraft, Director of the Johnson Space Center and also the 1979 Von Karman Lecturer.

Don, an Associate Fellow of AIAA, has heartily endorsed by the San Francisco Section as a consequence of his presentation to their Section entitled "The (Re) Introduction of Hang Gliding to the Technical Community." For the Distinguished Lecture Program, the presentation will be titled "Hang Gliding – Fulfillment of a Dream – Antiquity to Present." The lecture captures the spirit of hang gliding. Its history is reviewed from the earliest origins to current designs. Other topics which are discussed include performance, flight techniques, equipment, training, and safety considerations.



Finally, comments are addressed as to the role and importance of the U.S. Hang Gliding Association in the sport. The lecture is basically nontechnical, however, data are presented as necessary to illustrate and support key concepts and conclusions.

ARA store "special of the month"

Beer stein with NASA logo. Sale price $2.75 (regularly $3.00). Sale lasts through the end of June.

Scuba Club

We are having our Monthly Meeting on Tuesday, June 5, 1979, between 11:30 and 12:30 in the private dining room at the Ames Cafeteria. Come and talk about some ocean dives and maybe even car-pool dives!

Insurance rep

A representative from California Casualty will be at Ames on June 12 and 14 from 11:00 to 1:00, Bldg. 241, Room 147.

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
79-94	Assistant Chief, Technical Services Division	GS-13/14	RS	NASA-wide/ outside	6-22-79
79-95	Secretary (Steno) or (Typing)	GS-4/5	AFB	Ames/outside	6-8-79
79-96	Mathematics Aid/Technician	GS-4/5	FAX	Centerwide/ Army/Tenant/ outside	6-15-79
79-97	AST, Data Systems	GS-12/13	FAX	Centerwide/ Army/Tenant/ outside	6-15-79
79-98	Wind Tunnel Mechanic Foreman	WS-11	FAO	Centerwide/ Army/Tenant	6-15-79
79-100	Planner and Estimator (2 positions)	WS-8	RSTC	Ames/Army/ Tenant	6-15-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
79-49	Aerospace Engineer	FVQ	Stevens, Victor
79-71	Research Aircraft Mechanic Foreman	FOS	Scheller, Charles
79-81	Research Aircraft Mechanic	FOS	Boyer, Michael
79-90	Secretary (Typing), GS-4/5	SST	Cancelled
	Secretary (Steno), GS-4/5		
Y-9-79	Secretary (Typing)	FHR	Cancelled

Want ads

Transportation

'71 Alfa Romeo Spider, 5 speed, 25 mpg, silver, Pirelli radials, $3750/offer. 996-2272 eves.

FOR SALE: 1977 Pontiac Safari Wagon, AC, PS/PB, AM/FM, PW, Cruise, 29,000 mi. Call 867-4883.

Want to join a carpool. I live in East San Jose near Tully & McLaughlin. Would like a ride to Hangar One (NAS Moffett) weekdays. Working hours 0700–1530/flexible. Am willing to share driving, expenses. James Bromley, 966-5410.

Would like to join carpool from San Francisco beginning June 25. Live in Sunset area, will share driving. Flexible hours. Call Jeff Lee, ext. 6520 afternoons.

Would like to form carpool from 19th Ave. in San Mateo to NASA. Hours 0730 to 0400. Call Al Benitou, ext. 5465.

Housing

HOMES FOR SALE: Mountain View, Mayfield Mall area, 3 bdrm, 2 ba, $89,500. Los Altos, off Grant Road, 3 bdrm, 1 ba. on 1/3 acre, $133,500/offer. San Jose, 3 bdrm, 2 ba. with family room, off Hwy. 17, near Winchester and Hamilton Ave., $84,000. Call 374-2240 eves/wkends.

Male housemate wanted: Own room in 3 br, 2 ba. Mt. View house. Nonsmoker. Available through Aug. 31 only. $135/mo. 965-0845 evenings.

A nice lady desires 1 bedroom apt/small house to rent. Call after 5:00 p.m. 961-4105.

Room and board: Available June 23, Palo Alto, M/F, nonsmoker. Evening meal preparation and light housework in exchange for most of rent. 969-4040 daytime.

Miscellaneous

FOR SALE: Doughboy pool. 24'x16'. Over-size pump and heater. Very good condition, $350. 738-2948.

FOR SALE: Aristocrat 16' Low Liner trailer. Sleeps 5, full kitchen, may be stored in your garage. Must be seen to appreciate. $1,495. 738-2948.

FOR SALE: Electric composter. Very good condition, $95. Call 657-4247 after 6 p.m. or weekends.

PIANO, upright with bench, Gulbransen. Excellent tone quality, resonance. Cash and carry, $550. Call 252-0333 after 5:30.

FOR SALE: Baby crib with mattress, $30; ladies bicycle, 19" Huffy 3-speed, $30. Phone 739-3858, (Sunnyvale).

Noritake Pinebrook service for 8, 2 bowls and platter, $200. 341-6736 eves.

Antique Surrey, American made c. 1870. Solid, drivable, needs upholstery. $2000, 341-6736 eves.

WANTED: Servicible one-speed bicycle for under $40. Large frame preferable. Call Tom Kropp, 681-6418.

FOR SALE: Freezer, Kelvinator upright, frost-free, about 15 cubic feet, $80. Call 252-7842.

DAY CARE: Happy home. Crafts, music, outings. Berryessa area. Ages 2-6 years. 272-3351.

Office chairs: 2 with arm rest, $35 ea.; 2 w/o arm rest, $30 ea. Call 321-8838 after 4 p.m.

Organ, Hammond Cadette, auto rhythm, dual keyboard, walnut, with bench, good condition. Here's your chance to learn to play a beautiful instrument. $495. 736-0933.

Are you planning a party or wedding reception? Brighten it up with live music. These three girls play the organ, drums, and guitar and they also sing your favorite songs. Their music consists of yesterday's hits to the current disco beat. Many references. 739-9768.

Responsible college student would like to house sit over summer work period. Call 446-3461.

ITEMS FOR SALE: Moving necessitates disposition of these. Simmons Hide-a-Bed (Perfect Sleeper mattress), dark green, $70; Danish arm chair, brown tweed cushions, $15; nylon shag twist carpet (wheat color), 11x12 ft, $70; 3-drawer dresser, $10; student desk, knee-hole, 3-drawer, $15; studio couch, wine, $15; dining table, seats 4, $15; call 326-5001 (Palo Alto) after 6 p.m.

WANTED: used 243 or 30.06 hunting rifle. Phone 248-5546 evenings.

Bunnies to good homes. Call Anita at 255-6585.

FOR SALE: Pet snake; 36" long, with 36x12x15 cage, hot rock and water bowl. Asking $40. 657-2017.

Ladder, 16 ft, aluminum extension, $20. 262-9396.

Experienced painter, thorough and reliable work, interior or exterior. References. Call for estimate. 328-2661 evenings.

The American Red Cross Blood Mobile will visit Ames Research Center on June 13, 1979, between the hours of 8:30 a.m. and 1:00 p.m. in Bldg.N-239, Room B39 (Basement).

LOST: Nursing pin from Indiana University School of Nursing, 1973. Lost in vicinity of Bldg. 203 on May 8th. If found, please call Marion, ext. 5287.

FOR SALE: 25 ft Coronado sailboat. Sleeps 5, galley, head, new rigging and jib; recently hauled; many extras. Partnership $1995, 738-2948.

"Thank you"

Thanks to Vance Oyama, Leonel Stollar, Mitchell Radovich, Robert Gordon, and Donald Moody for your support and cooperation during my term of office as the Chairman of the San Francisco Section of the American Scientific Glass Blowers Society.

Harry Horn

The Astrogram

Admin. Mgt. Building, Phone 965-5422

The Astrogram is an official publication of the Ames Research Center, National Aeronautics and Space Administration, Moffett Field, California, and is published bi-weekly in the interest of Ames employees.

Editor . . . . . Meredith Moore
Associate Editor . . . . Marcia Kadota
Reporters . . . . . NASA Employees

Deadline for contributions: Thursday between publication dates

National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035

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CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

PREPARED BY:
VISITS COORDINATOR
965-5546 M.S. 253-1

June 11 –	June 12 –	June 13 – Blood Mobile visit Time: 8:30 a.m. – 1:00 p.m. Location: N-239, room B-39	June 14 – Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 15 –
June 18 –	June 19 –	June 20– Ames Stamp Club meeting Time: 11:30 p.m. Location: N-241, room 113 National Federation of Federal Employees (NFFE) monthly meeting Time: 12:00 – 12:30 p.m. Location: N-213, room 261	June 21 – Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 22 –
June 25 –	June 26 –	June 27 – Ames Photo Club monthly meeting Time: 4:45 p.m. Location: N-245, Auditorium	June 28 – Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 29 – If you wish to have an event announced on this calendar please notify Linda Mackey, Visits Coordinator, ext. 5546, M/S 253-1. The next calendar will cover the period June 25 – July 13. The deadline is June 5.

WEEKEND ACTIVITIES:

ARC Golf Tournament
Aptos Gold Course
Time: 10:00 a.m.
Chairman: Sal Tardio
Sign up by June 20th

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

JUNE 5, THRU JUNE 11, 1979

A LA CARTE MENU

TUESDAY
Chicken Fricasse over Noodles.....
Spanish Rice and Bacon.....
Choice of One: Whipped or Hashed O'Brien Potatoes, Peas, Buttered Corn or Salad
Soup - Cream of Fresh Mushrooms.....

WEDNESDAY
Ham Steak Hawaiian Style.....
Tamale Pie Casserole.....
Choice of One: Au Gratin or Whipped Potatoes, Buttered Spinach, Glazed Carrots or Salad
Soup - Old Fashioned Navy Bean.....

THURSDAY
Smothered Liver with Onions.....
Pork Fried Rice.....
Choice of One: Mashed or Lyonnaise Potatoes, Green Beans, Cauliflower or Salad
Soup - Fresh Vegetable and Beef.....

FRIDAY
Roast X-Rib of Choice Beef.....
Seafood Curry over Biscuit.....
Creole or Cheddar Cheese Omelette.....
Choice of One: Snowflaked or Country Fried Potatoes, Cut Buttered Broccoli, Stewed Tomatoes or Salad
Soup - Boston Clam Chowder.....

MONDAY
Pork Chop Creole Style with Rice.....
Turkey, Macaroni and Creamed Cheese Casserole.....
Choice of One: Whipped or Hashed Brown Potatoes, Harvard Beets, Green Peas or Salad
Soup - Cream of Potato.....

DAILY SPECIALS
INCLUDES: A $1.30 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A 25¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

* * * * * * * * * * * * * * * * *

JUNE 12, THRU JUNE 18, 1979

A LA CARTE MENU

Italian Pot Roast with Spaghetti.....
Turkey Au La King on Biscuit.....
Choice of One: Snowflaked, Hashed O'Brien Potatoes, Green Beans Savory Style, Buttered Corn or Salad
Soup - Tomato and Rice.....

Chicken Legs Sauted with Rice.....
Sweet and Sour Meat Balls.....
Choice of One: Mashed Potatoes, Buttered Rice, Zucchini & Tomatoes, Lima Beans or Salad
Soup - Beef & Noodle.....

Smothered Beef Liver with Onions.....
Boston Baked Beans & Franks or Lasagna.....
Choice of One: Whipped Potatoes, Buttered Noodles, Green Peas or Beets
Soup - Leek & Herbs.....

Smoked Ox Tongue over Spinach with Raisin Sauce.....
Seafood Crepes and Newburg Sauce.....
Choice of One: Snowflaked, Hashed O'Brien Potatoes Peas & Corn, Italian Beans or Salad
Soup - Borscht or Cony Island Clam Chowder.....

Roast Cross Rib of U. S. Choice Beef Au La Natural.....
Spaghetti Tetrazzini.....
Choice of One: Whipped, Creamed Potatoes, Stewed Tomatoes, Peas & Mushrooms or Salad
Soup - Cream of Onion.....

INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A .30¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

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NASA

The Astrogram

VOLUME XXI NUMBER 18

June 14, 1979

Pioneer 10 to cross Uranus orbit path July 11

Pioneer 10, the first spacecraft to approach and investigate the planet Jupiter and the first spacecraft to head out of the solar system, will cross the orbit of the planet Uranus on July 11, 1979.

The seventh planet out, Uranus is 2.9 billion kilometers (1.8 billion miles) from the Sun and about 2.7 billion km (1.7 billion mi) from Earth. The planet takes 84 Earth years to orbit the Sun.

Cornell University astronomers aboard the NASA-Ames Research Center Kuiper Airborne Observatory discovered two years ago that Uranus has five rings – the first major discovery in the solar system since Pluto was identified in 1930. On the March 1977 expedition, scientists detected the rings when they blocked out the light from a star. Before this discovery, scientists had thought Saturn's rings were unique in the solar system.

On the July 11 crossing date, Uranus will be 172 degrees around its orbital path from Pioneer 10. This is nearly half an orbit away, 8.7 billion km (5.4 billion mi) across the solar system.

In December 1973, Pioneer 10 returned the first closeup views of Jupiter with its huge red eye, and of its four planet-sized moons. Pioneer 10 made a variety of discoveries about the huge planet's magnetic field, radiation belts and weather.

The spacecraft was launched March 3, 1972, for the first flight beyond Mars and through the asteroid belt, dispelling theories about an asteroid barrier to outer planet exploration. Mission planners used Jupiter's gravity to hurl the spacecraft on an escape trajectory out of the solar system.

After its historic visit to Jupiter, Pioneer 10 went on to cross Saturn's orbit in February 1976. Passing Uranus' orbit, the spacecraft next heads for Neptune, and then on to the expected limit of radio communications when it crosses Pluto's orbit in 1987. Later it will leave solar-influenced space, crossing the boundary into interstellar space.

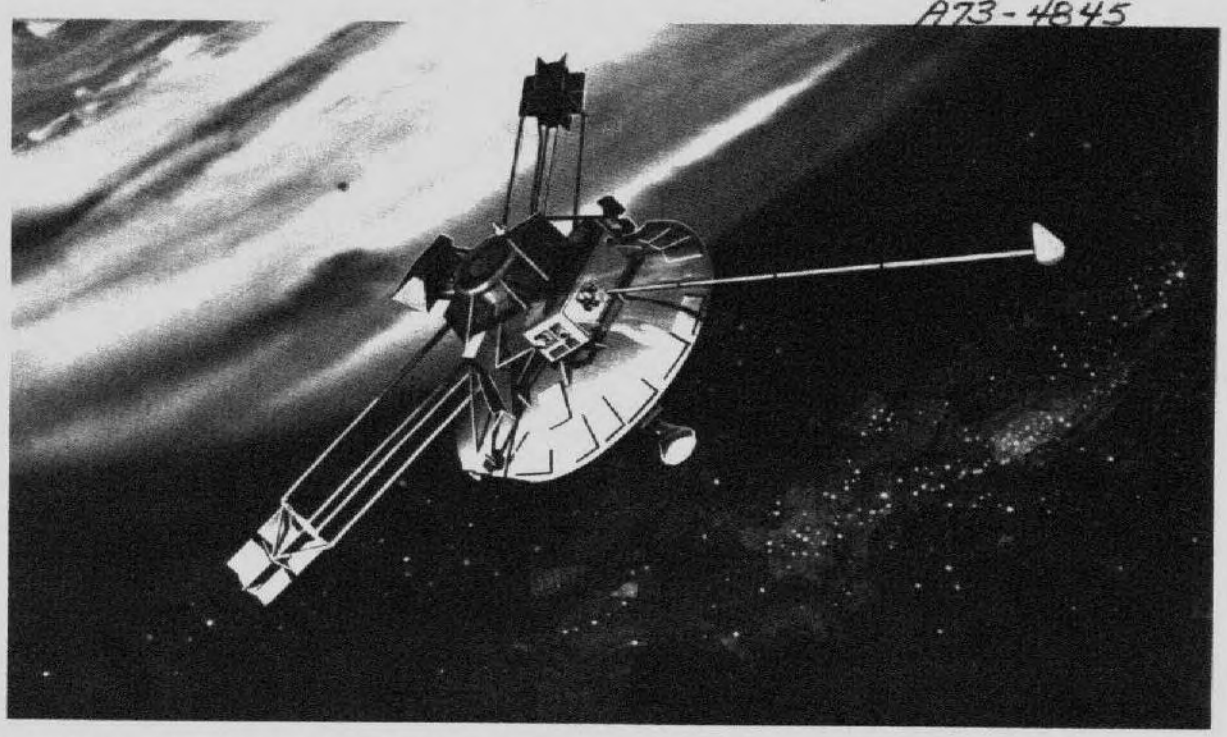
The 259-kilogram (570-pound) spacecraft continues to perform well, returning valuable data about characteristics of unexplored space in the outer solar system.

Pioneer 10 is headed generally in the direction of the red star Aldebaran, the center of the constellation Taurus. Its ultimate destination relative to the constellations cannot now be calculated because scientists don't yet know enough about motions of the stars. Once it leaves the solar system, the spacecraft's radio signals will be too faint to be detected at Earth. The vacuum of space is expected to preserve Pioneer in good condition, but its nuclear power source will cease to function in a few decades. Scientists calculate that as it wanders through the galaxy, Pioneer 10 will encounter a star system (solar system) about once every million years.

Pioneer 11, identical twin to Pioneer 10, now is making the first trip to Saturn. Pioneer 11 added greatly to knowledge of Jupiter by taking the first look at the planet's polar regions (not visible from Earth).

Pioneer 11 made its inspection of Jupiter in December 1974. It will reach Saturn this September, the first spacecraft to encounter the planet. Pioneer 11 will fly under the rings, sending back the first photo images of these unusual structures.

A73-4845



After its encounter with Saturn, Pioneer 11 also will head out of the solar system. This Pioneer will travel in roughly the same direction as the solar system moves through the interstellar gas, nearly opposite the path of Pioneer 10. Hence, it may reach interstellar space before Pioneer 10 does.

Each Pioneer carries a plaque with an explanatory message about its origin for any intelligent species that may intercept the spacecraft during its endless journey through the cosmos.

A model of Pioneer 10 is displayed in the Smithsonian Institution's National Air and Space Museum in Washington, D.C., besides the Apollo 11 command module, Lindbergh's Spirit of St. Louis and the Wright Brothers' Flyer.

Remember the future

On July 20th, 1979, it will have been ten years since Neil Armstrong's indelible words, "That's one small step for a man, one giant leap for mankind," echoed across the vastness of space to the waiting peoples of planet Earth. The Apollo program represented Humankind's first small step into the ocean of space, but sadly, ten years later we still have not taken the much heralded "Giant Leap."

Now more than ever before, we see an exciting, imaginative vista of space progress ahead of us. We contemplate orbiting civilizations, satellite solar power stations, space factories and perhaps we see the tentative beginnings of interstellar travel. But the comprehension of such visions by no means insures their feasibility or inevitability. In the ten years since Apollo 11 we have seen space expenditures slashed by politicians whose imagination does not extend beyond the next election date. Even NASA appears to be deliberately lowering its sights – exhibiting timidity in the face of a grand future vision. The recently announced Presidential space policy falls far short of establishing a follow-on to Apollo's small step. As a result, moves are underway to create a dynamic, far-reaching, expanded space program.

To keep you fully informed about past, present and upcoming space developments, the San Francisco/Bay Area Sections of the American Astronautical Society and the American Institute of Aeronautics and Astronautics invite you to a two-day commemorative conference on the tenth anniversary of the Apollo 11 lunar landing. The emphasis of the conference will be on future programs of the kind mentioned above. The conference will begin on Friday morning, July 20, at the San Francisco Airport Hilton. Attendees will have the chance to view both political and technical aspects of a Giant Leap into space. There will be a banquet dinner with an exciting feature speaker on Friday evening. The conference continues on the following day and concludes that Saturday afternoon, July 21. (On the evening of July 19, a related planetarium show, "First Trip Between Two Planets," will be presented at Foothill College, about 30 minutes drive south of the Airport.)

Papers on a broad range of future space topics will be presented by such individuals as Peter Vajk (Financing space industrialization), Robert Edelson (JPL/SETI), Mark Frazier (Earthport), B. J. Bluth (Astronaut stress in Spacelab/Shuttle), Poul Anderson – and many others. Replies are awaited from invitations sent to Soviet cosmonaut Alexei Leonov,

(Continued on Page 2)

Future

(Continued from Page 1)

to Russell Schweikert, Robert Frosch and Neil Armstrong. Papers are still invited, as well as organizational contributions from qualified individuals.

The San Francisco/Bay Area Sections of the AAS and the AIAA strongly suggest you circle July 20-21 on your calendar and plan to attend this important conference where we'll celebrate the past by remembering the future. For more information write – The San Francisco/Bay Area Section of the American Astronautical Society, PO Box 7205, Menlo Park, California 94025; The San Francisco Section of the American Institute of Aeronautics and Astronautics, PO Box 1548, Mountain View, California 94040, or call Space Age Review (co-sponsoring) at 408/737-1394.

NASA forum at Palace

Are we alone in the universe?

Four scientists will talk about the chances for life on other planets in a panel discussion at 8:00 p.m. Wednesday, June 20, in San Francisco's Palace of Fine Arts Theatre. Free and open to the public, the forum is sponsored by Ames.

Physicist Philip Morrison of Massachusetts Institute of Technology (M.I.T.) will lead the discussion with Harvard astrophysicist A. G. W. Cameron, anthropologist Bernard Campbell and paleontologist James Valentine.

Reporting the latest findings about the search for extraterrestrial life, the scientists will talk about the strategy for searching the universe, including a plan to "listen" for intelligible radio signals from other civilizations.

The four experts will tell how Earth might appear in space to another civilization and what clues scientists might use to identify an advanced civilization observed from Earth.

The group also will discuss aspects of cosmic, biological and cultural evolution, as well as the importance of climate, atmosphere, land masses and bodies of water for the development of advanced civilizations.

If intelligent life exists on other planets in our galaxy, the scientists say it probably would live on a planet circling a star, have a chemistry somewhat similar to our own, be able to communicate over great distances and might be more advanced than our civilization.

In our galaxy alone, stars with habitable planets probably number in the billions, scientists estimate. Although the chemicals common to the human body are plentiful throughout the galaxy, scientists still must determine whether this material produces life and how sophisticated that life becomes through evolution.

If intelligent life is distributed evenly throughout our galaxy, a billion civilizations would be about 25 light years apart. If there are a million civilizations, they would be about 800 light years apart. And if there are only 10,000 such societies in our galaxy, they would be separated by about 10,000 light years – a journey which a Neanderthal man traveling at the speed of light would just now be completing.

Because of these great distances, scientists are trying to find ways to "listen" to space. Some hope to find and perhaps join an interstellar communication network through which other societies may have been communicating for perhaps thousands of years.

Morrison, chairman of the Physics Department and institute professor at M.I.T., was one of the first scientists to advocate the search for extraterrestrial intelligence. Author of numerous publications, Morrison is the book editor for "Scientific American" and was chairman of the NASA-sponsored Search for Extraterrestrial Intelligence (SETI) Science Workshops.

Cameron, professor of astronomy at the Harvard College Observatory at Harvard University, is associate director for planetary sciences at the Center for Astrophysics in Cambridge, Mass. He is co-editor of "Interstellar Communication: Scientific Perspectives."

Campbell, an affiliate of the L.S.B. Leakey Foundation in Pasadena, has taught at the University of California, in Los Angeles, at Harvard and at Cambridge University in England. He is the author of "Human Evolution," a widely used anthropology text.

Valentine, professor of geological sciences at University of California, Santa Barbara, has spent most of his career in the University of California system at Los Angeles, Davis and Santa Barbara. Author of three books and more than 100 articles, Valentine is a specialist in evolution theory.

Courses to be televised Summer Quarter 1979

STANFORD INSTRUCTIONAL TELEVISION NETWORK

Course No.	*Title*	*Units*	*Days*	*Time*
AERO/ASTRO				
AA 292S	Large-Scale Computer Applications in Aerospace Technology	3	TTh	8:20-9:55
CIVIL ENGINEERING				
CE 283	Geotechnical Aspects of Earthquake Engineering	2	M	10:00-12:00
COMPUTER SCIENCE				
CS 111	Intro. to Computer Organization, Machine and Assembly Languages	3	MW	9:00-10:50
CS 135	Numerical Methods	3	TTh	10:00-12:00
ELECTRICAL ENGINEERING				
EE 180	Systematic Programming	3	MTWTh	11:00-11:50
EE 182	Digital Computer Organization	3	TTh	3:15-4:55
EE 216	Principles and Models of Semiconductor Devices	3	MTWTh	10:00-10:50
EE 261	The Fourier Transform and Its Applications	3	MTWTh	2:15-3:05
EE 363	Introduction to Linear System Theory	4	MTWThF	8:00-8:50
EE 482	Advanced Computer Organization	3	MTWTh	1:15-2:05
EE 611	Microprocessor as a Circuit Component	2	TTh	1:15-3:05
ENGINEERING				
E 208	Digital Control II	3	MTTh	11:00-11:50
INDUSTRIAL ENGINEERING				
IE 133	Industrial Accounting	4	MTWThF	8:00-8:50

ASSOCIATION FOR CONTINUING EDUCATION
Summer Semester/Quarter 1979

Number	*Course Title*	*Units*	*Start and End Dates*	*Day*	*Time*
GOLDEN GATE UNIVERSITY MBA PROGRAM					
EC 289	Government Policy and Business	3(GGU)	5/24-8/30	Th	4:30-7pm
GM 279	Strategic Planning and Executive Action	3(GGU)	5/21-8/29	MW	7-8:15am
HR 241	Personnel Administration	3(GGU)	5/22-8/30	TTh	7-8:15am
COLLEGE OF NOTRE DAME FOUNDATION COURSES (and Management Development)					
ECON C102	Economics for Managers	2(CND)	6/25-8/27	M	5-6:45pm
MATH C104	Intro. to Computer Technology	2(CND)	6/27-8/29	W	5-6:45pm
SPECIAL AND GENERAL INTEREST COURSES					
BA C102.04	Principles of Cost Accounting	2(CND)	6/26-8/28	T	5-6:45pm
BA C135.02	Management Skills for Supervisors	2(CND)	6/25-8/29	MW	12-1pm
SPT 100	Signing: The Silent Language	—	6/26-8/30	TTh	12-1pm
IMS 101	Intro. to Industrial Microcomputer Systems*	—	6/25-8/29	MW	12-1pm
ENG 814	Intro. to Oil and Gas Production	—	7/10-8/16	TTh	12-1pm
ET 200A	Basic Electronics: A Crash Course in the Fundamentals*	—	6/27-8/29	W	5-6:45pm
ET 300B	Math for Electronics Technicians	2(COG)	6/26-8/28	T	5-6:45pm
ET 400D	Fundamentals of Silicon IC Fabrication*	1(COG)	6/28-7/26	Th	5-6:45pm
PERSONAL DEVELOPMENT COURSES					
MGT 104	Interviewing for Results	—	8/14-8/23	TTh	12-1pm
PR 100	Managing Anger and Stress	—	6/25-7/23	M	5-6:45pm
PR 814	Effective Reading*	—	6/26-7/26	TTh	12-1pm
PR 816	Personal Shorthand*	—	6/26-8/07	TTh	12-12:30pm
PR 820	Administrative Skills for Secretaries*	—	6/25-7/30	MW	12-1pm
PR 820A	Advanced Administrative Skills for Secretaries*	—	8/06-8/29	MW	12-1pm
PR 824	Communicating Successfully*	—	6/29-7/20	F	12-1pm
PR 850	Creative Problem Solving	—	7/09-7/27	MWF	12-1pm

*Videotape Courses

Contact the Training Branch, ext. 5622 for further information.

A special "thank you"

Attention: Sponsors of John H. Bouldt in the Boston Marathon Race Against MS

Dear Friends:

On behalf of the National Multiple Sclerosis Society, I extend warm thanks to all of you who pledged money to fight MS for John Bouldt's participation in the Boston Marathon. Because of your generosity, Mr. Bouldt was able to forward a very impressive sum of $689.58 to the Athletes vs. MS campaign, an appeal spearheaded by champion Bill Rodgers.

Your money supports the research, patient service, and education programs through which the Society wages war on multiple sclerosis, a chronic and disabling neurological disease for which neither cause nor cure is yet known.

All those who yearn for the day when the cruel mysteries of MS are solved depend on the concern of people like you. Thank you for giving it so splendidly.

Very sincerely,
Walter K. Hall
Executive Director

ARA ACTIVITIES

This notice is directed to those of you who purchased "Bulb-Miser" lamp socket inserts from the ARA store. Bulb-Misers were formerly sold at MSFC. Sales were immediately discontinued when a fire in a lamp was attributed to a Bulb-Miser. A metal projection in the lamp socket perforated the electrical insulation of the Bulb-Miser and created an undesirable current path which eventually produced a fire.

Although no ARA Bulb-Miser customer has reported any Bulb-Miser malfunction, I have directed the ARA store to discontinue selling the product. The ARA store will refund the purchase price of any of these returned items whether they are used or not.

Stan Benbow, President, ARA

Happy hour

There will be an ARA Happy Hour in the cafeteria on June 22 from 4:30 to 6:30 p.m. All of the Ames staff, retirees and resident contractor personnel are invited to attend this spring fling. See you there.

Discount coupons

Discount coupons are available at the ARA store in the Ames cafeteria. These coupons are provided at no cost to Ames employees and resident contractors. They provide varying discounts on tickets purchased "at the gate" and include such groups as:

Marine World, Redwood City
Great America, Santa Clara
Roaring Camp and Big Trees, Felton
Golfland, Sunnyvale and San Jose
Ice Capades, Vallco Fashion Park, Cupertino
Reno Bonus Package
Magic Kingdom, Disneyland
Magic Mountain
San Diego Zoo

Queen Mary Tours and Restaurants, Long Beach

Also, the discount tickets are still available for Frontier Village, Marine World, and Great America. These are the special priced tickets available at the ARA store.

Sportfishing

Want to add to your food budget and have fun at the same time? Call Kit at ext. 5091 for information about Salmon, Rock Cod and Bass fishing out of Fisherman's Wharf.

Special notice

A false and misleading rumor sweeping the nation is plaguing the Veterans Administration and leading hundreds of thousands of veterans to write to the VA requesting dividends on lapsed GI insurance based on service in World War II.

Congress has not passed a law giving all World War II veterans a 50¢ per 1,000 dividend on GI policies. The VA has not requested veterans to write regarding such a dividend. It is a hoax.

The only dividends that the VA is currently paying are to World War I, World War II and Korean War veterans who have continued their Government Life Insurance in force. These dividends are paid on an annual basis and are distributed on the anniversay date of the policies.

The VA requests that this information be passed along to your veteran friends and associates.

The Veterans Administration thanks you.

Fastpitch Softball

A79-0335

The Ames Fastpitch Softball Team representatives (from right to left) Michael Green (player/coach), Joe Shields (Publicity manager/player) and George Alger (captain) receive the San Jose Industrial Softball League "runner-up" silver plate presented by Center Deputy Director Tom Young. The squad captured the number two position with a ten to nothing victory in thrilling tie breaking play-off action. Once again, great pitching, solid defense and timely hitting pays off. Keep up the good work fellows!

Richard Cower receives monetary award

A79-0415-1

A monetary award was presented to Richard Cower of Model and Instrument Machining Branch for his suggestion to improve the method of material storage at Bldg. 220. Presenting the award was Mitch Radovich, Chief of Model and Instrument Machining Branch.

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
79-84	AST Technical Management	GS-11/12	Biosystems Division	Ames/Army/Tenant/outside	Amended and extended to 7-6-79
79-101	Secretary (Typing)	GS-4/5	FAX	Ames/Army/Tenant/outside	7-13-79
79-102	Secretary (Typing)	GS-4/5	RKM	NASA/Ames/Army/Tenant/outside	7-2-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

Y-12-79	Aircraft Mechanic	WG-10	AeroMech Lab. Support Div.	Army/Ames/Tenant/outside	6-25-79

TO APPLY: Complete APM 62 and submit to Mail Stop 241-6.

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
79-67	Wind Tunnel Mechanic	FAO	Kit Boyce (outside)
			Roger Bummer
79-68	Administrative Support Clerk	D	Jeanne Merriam
79-69	Contract Specialist	ASR	Richard Couture
79-70	Contract Specialist	ASA	Raymond Sanchez (outside)
79-73	Secretary (Typing)	DE	Karen Jackson (outside)
79-77	Electronics Mechanic	FOS	Joseph Lestards
			Clinton Hancock (outside)
79-78	Procurement Clerk (Typing)/Clerk-Typist	ASB	LaVerne Green
Y-7-79	Mechanical Engineer	RFR	Scott Maa (outside)

Want ads

Transportation

FOR SALE: 1975 Mustang II, 4 speed, hatchback, mag wheels, nice interior, needs body work. Asking $800 or make offer. Please call Betty Hemphill (408)683-4698 after 7 p.m.

– – – – –

1971 Triumph Stag: 3 liter OHC V8; 4 spd w/o.d.; good gas mileage! VGC, best offer over $7300. 736-7759 anytime.

– – – – –

'67 Pontiac Bonneville, V-8, PS, PB, PW, new tires, large trunk, $300. 968-3307 evenings.

– – – – –

Pickup on this gas saver! 1979 Ford Mustang, 4 cyl, 4 spd, AM radio, 36,000 mile warranty, $600 down and pay $125.40 monthly. Sound design console stereo, 2 and 4 channel BSR turntable, 8 trk AM/FM/MPX/AFC, asking $150. 262-0624.

– – – – –

'67 Corvette Roadster, convertible, new paint, battery, radiator, carburator, carpets, mats, very nice, $7200. Call 736-3810 after 4:30.

Housing

Gas-saving vacation: Santa Cruz luxury condominium at Beach/Yacht Harbor, 2 br, 2 ba, sleeps 6; AEK, 2 decks. $250/wk, incl. everything except linens. Don Frolich, 245-3243.

Condominium for rent: $450 per month, Blossom/Snell area, available after 6/10/79. 3 br, 2 ba, 2-story cluster home. Permanent Spanish tile roofs, peaked ceilings. Front and pack patios, large lawn area, pool, cabana, built-in vacuum system, electric garage door opener, indoor laundry room, plumbed for soft water. 996-2728, days; 964-9900, eves.

– – – – –

For rent – weekly. New, modern Capitola condo, 2 br, 1 ba, completely furnished, pool and Jacuzzi, walking distance to New Brighton and Capitola beaches. Call 948-0165.

– – – – –

Deluxe 3-br, 2 ba apartment in Cupertino. Patio, fireplace, locking garage. Available June 1. $450/mo. 252-3937 evenings.

– – – – –

San Carlos home, 3 br, 1 bth, newly landscaped, quiet street, near schools and park. $121,950. Call 591-6158.

– – – – –

For rent: House, contemporary 2 story, redwood and glass, 4 br, 2 ba, DR, AEK, deck, spa, view Los Altos Hills, 12-15 min from ARC. Avail. July 15, $850/mo. 941-9898.

– – – – –

Squaw Valley condo, summer rates, daily/weekly, 3 br, 2 ba, view, w/w carpets, private entry, fireplace, cable TV, ice skating, movies, tennis, hiking, horseback riding, and GAS! 968-4155 eves.

Miscellaneous

FOUND: rare coin, collector's item. Please call Dean at 5578.

Summer cleaning sale: archery equipment – 3 bows, arrows, guards, quiver, and misc. extras, all for $50; VW tow bar, fits '73 and later Super Bugs, $20; outdoor FM antenna, $20. 736-7759.

– – – – –

Siberian husky, 2½ years old, male, papers, best offer, call 733-9708.

– – – – –

FOUND: Money. Loser may claim by describing amount and circumstances. Doug Pearson, ext. 6623.

– – – – –

For Sale: King-size waterbed, headboard and frame padded w/naugahyde covering, heater, vibrators, new mattress. Asking $375 (over $600 new). Call (408)683-4698 after 7 p.m.

– – – – –

Camera, Olympus Pen-F, 35 mm SLR, plus 25 mm wide angle and 150 mm telephoto lens. $200. 257-3175 after 6 p.m.

– – – – –

For sale: Covered car top – like new. Used only twice. $35. Call 262-7981 after 5 p.m.

– – – – –

Free puppies: 8 wks old, mixed German shepherd (all white), 3 females, 1 male. Please call (408)683-4698 after 7 p.m.

– – – – –

Phonebooks are available for the following areas in Bldg. 241, room 111: San Francisco, Marin and Livermore. Books for San Jose, Los Altos and San Mateo are available in the basement of Bldg. 200.

– – – – –

LOST (vicinity of N-239): Black fabric "sea" bag with leather bottom and rope drawstring. If found, please call Fred at ext. 5728.

– – – – –

Roommate wanted to share 3 br, 2 ba apartment in Cupertino. M/F, $170 + ½ util. 253-7031 after 6 p.m.

– – – – –

For sale: Automobile air conditioner, Sears, 3-spd, with thermostat, includes all equipment: Bezel, condenser, radiator, compressor and hoses. Was used on Ford station wagon with V8-390 cu. in. engine. $35. Call 245-6411.

– – – – –

Box springs: two twin-size (no mattress), one is nearly new, $20 for both. Call 968-4624 afternoons or evenings.

– – – – –

Wanted: Car for rent till middle of August. Must be automatic trans. Call Mike at ext. 6457.

– – – – –

Refrigerator/freezer, 17 cu. ft., Frigidaire, white, excellent condition, $175, 244-4632.

– – – – –

I am interested in sharing in a car pool. I live 4 blocks behind Valley Fair in San Jose going toward Santa Clara. My working hours are 7:30 a.m. to 4:00 p.m. Call ext. 5140 (work) or 244-2546 (home).

– – – – –

I would like to organize a vanpool as driver/coordinator with rides for Bay Area Commuters, Inc., from East Foothills of San Jose. Depending on response, considering both 7:30 a.m. to 4:00 p.m. and 8:00 a.m. to 4:30 p.m. Any interested persons wishing to vanpool, contact Fred Lemos, ext. 5463.

The Astrogram

Admin. Mgt. Building. Phone 965-5422

The Astrogram is an official publication of the Ames Research Center, National Aeronautics and Space Administration, Moffett Field, California, and is published bi-weekly in the interest of Ames employees.

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Reporters . . . . . NASA Employees

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National Aeronautics and Space Administration
Ames Research Center
Moffett Field, California 94035

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CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

PREPARED BY:
VISITS COORDINATOR
965-5546 M.S. 253-1

June 25 –	June 26 –	June 27 – Ames Photo Club monthly meeting Time: 4:45 p.m. Location: N-245, Auditorium	June 28 – Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	June 29 –
July 2 –	July 3 – Ames Scuba Club monthly meeting Time: 11:30–1:00 p.m. Location: N-235, Ames cafeteria private dining room	July 4 – INDEPENDENCE DAY!	July 5 – Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	July 6 –
July 9 –	July 10 –	July 11 – Flight Systems Research Division Seminar Speaker: Professor A. S. Willsky, Laboratory for Information and Decision Systems, M.I.T. Topic: Abrupt Changes in Signals and Systems Time: 10:00 a.m. Location: N-210, Room 205 Ames Stamp Club meeting Time: 7:30 p.m. Location: N-241, Room 237	July 12– Bible study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	July 13 – If you wish to have an event announced on this calendar please notify Linda Mackey, Visits Coordinator, ext. 5546, M/S 253-1. The next calendar will cover the period July 9 – July 27. The deadline is June 19.

WEEKEND ACTIVITIES:

June 30 –
ARC Golf Tournament
Aptos Golf Course
Time: 10:00 a.m.
Chairman: Sal Tardio
Sign up by June 20th

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

JUNE 19 THRU JUNE 25, 1979

A LA CARTE MENU

TUESDAY
Veal Scallopini.....
Boston Baked Beans & Polish Sausage.....
Choice of One: Mashed, Ideal Potatoes, Buttered Spinach, Peas or Salad
Soup - Fresh Vegetable.....

WEDNESDAY
Roast Pork & Dressing.....
Spaghetti and Raviolli.....
Choice of One: Whipped Potatoes, Mashed Yams, Cauliflower Buttered Lima Beans or Salad
Soup - Minestrone.....

THURSDAY
Beef Stroganoff.....
Macaroni, Cheese and Ham Casserole.....
Choice of One: Snowflaked, Creamed O'Brien Potatoes, Celery and Spinach, Glazed Parsnips or Salad
Soup - Cream of Onion.....

FRIDAY
Veal Birds with Mushroom Sauce.....
Seafood and Spaghetti with Special Sauce.....
Choice of One: Mashed, Au Gratin Potatoes, Tomato and Celery, Glazed Carrots or Salad
Soup - Shrimp Bisque.....

MONDAY
Lamb Stew and Dumplings.....
Baked Stuffed Potato with Cheese and Spinach.....
Choice of One: Whipped, Parslied Potatoes, Brussel Sprouts Buttered Beets or Salad
Soup - Chicken Gumbo.....

DAILY SPECIALS
INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A .30¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

JUNE 26, THRU JULY 2, 1979

A LA CARTE MENU

Pork Chop Creolo Style and Rice.....
Spicy Joe on Toast.....
Choice of One: Snowflaked, Scalloped Potatoes, Buttered Turnips, Peas & Pimentoes or Salad
Soup - Split Green Pea and Sliced Franks.....

Turkey Curry over Rice.....
Steamed Knackwurst and Red Cabbage.....
Choice of One: Mashed, Anna Potatoes, Brussel Sprouts, Harvard Beets or Salad
Soup - Beef Barley.....

Boiled Corned Beef and Cabbage.....
Baked Sweet and Sour Stuffed Cabbage.....
Choice of One: Whipped, Boiled Potatoes, Celery & Spinach, Carrot Vichy or Salad
Soup - Fresh Vegetable and Spaghetti.....

Fish Tempura and Tartar Sauce.....
Turkey Pie with Corn Bread Crust.....
Choice of One: Snowflaked, Cottage Fried Potatoes, Corn & Lima Beans, Peas & Celery or Salad
Soup - Corn and Clam Chowder.....

Ham Steak Hawaiian Style.....
Shrimp Chow Mein.....
Choice of One: Mashed Potatoes, Candied Yams, Hominy, Buttered Zucchini or Salad
Soup - Lentil and Diced Ham.....

INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A .30¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

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NASA

The Astrogram

VOLUME XXI NUMBER 19

June 28, 1979

Joint US/USSR medicine study

NASA and Soviet life scientists will join for the first time in a ground-based cooperative study to investigate physiological changes in humans resulting from simulated weightlessness.

Objectives of the joint study are to improve bed-rest test procedures, to help standardize physiological measurements and analysis techniques performed on astronauts and cosmonauts and to help reduce test duplication and increase the flow of information between the two groups.

The project was established two years ago under the auspices of the Joint U.S./U.S.S.R. Working Group on Space Biology and Medicine. Dr. Gerald Soffen, NASA Director of Life Sciences, and Dr. N. N. Gurovsky of the U.S.S.R. Ministry of Health, are cochairmen. The project involves NASA life scientists from Ames, and the Johnson Space Center.

Many of the effects on individuals of the weightless environment of space flight can be simulated on Earth by bed rest.

The research study includes two identical experiments, each involving 10 test subjects, aged 35 to 40 years. Each experiment will last five weeks, with two weeks of control observations, one week of bed rest, and two weeks of post-bed-rest measurements.

Stress tests of the cardiovascular system, including response to exercise, and extensive blood and urine sample analyses will be performed.

Experiment procedures call for five test subjects to remain horizontal in a total bed-rest condition, and for five to experience bed rest with their heads lowered six degrees from the horizontal.

Previous bed-rest studies in the United States have been conducted with the subjects in a horizontal position only. Soviet scientists have conducted studies with subjects placed both in the horizontal position and with subjects exposed to varying degrees of head-down tilt. The current studies will determine the best features of each procedure.

The first five-week study will be conducted at the Institute of Biomedical Problems in Moscow, beginning in mid-May. The second will start at Ames in mid-July. There will be an exchange of NASA and U.S.S.R. scientists during each of the experiments.

Members of the U.S. team will include scientists from several universities. Edward Ifft, chief of the International Program Policy Office at NASA Headquarters, is coordinating arrangements with the U.S. Department of State and the Soviet Union.

10th anniversary of Lunar Landing

A quarter of a million miles from Earth, between a boulder field and a circle of craters, there is a small memento to an immeasurable human triumph. The object is a steel plaque bolted to the primary strut, or landing leg, of the U.S. lunar module, the Eagle. It bears a map of the world and this inscription:

Here men from the planet Earth
first set foot upon the Moon
July 1969 A.D.
We came in peace for all mankind

The visitors stayed for less than a day. They walked in a setting unlike anything in their world and pressed their footprints into a substance that had been undisturbed for several billion years. When the ascent stage of the Eagle flew away, the landing gear and its inscription were left to the stark silence of the lunar surface.

The United States reached that historic achievement in eight years. Manned space flight to a foreign planet was the capstone to centuries of speculation and thought, and to the 20th Century explosion of aeronautics and rocketry.

With the establishment of NASA in 1958, the U.S. space effort became an operational enterprise as well as a focal point for research and development. That meant launching, operating and tracking vehicles and satellites and conducting the premier program for manned space flight: Project Mercury. In the spring of 1961 came the breakthrough – a 15-minute, suborbital Mercury ride by Alan Shepard.

President Kennedy went before the Congress on May 24, 1961, and charged the government and the American people with landing a man on the Moon and returning him safely before the decade was out.

(Continued on Page 2)

Astronaut Haise to resign

Astronaut Fred W. Haise, Jr., has announced that he plans to resign from NASA at the end of June to join Grumman Aerospace Corp., Bethpage, N.Y., as vice president for space programs.

Haise started his NASA career as a research pilot at the Lewis Research Center, Cleveland, in 1959. This was followed by three years at the Dryden Flight Research Center, Edwards, Calif. Haise was one of the 19 astronauts selected by NASA in April 1966.

He was the lunar module pilot for Apollo 13, April 11–17, 1970. The flight was to be a 10-day mission landing in the Fra Mauro region of the Moon. However, the mission was disrupted enroute to the Moon due to the explosive failure of the service module cryogenic oxygen system, about 55 hours into the flight.

Haise and fellow crewmen, James A. Lovell, Jr., and John L. Swigert, Jr., working closely with the Houston ground controllers at the Lyndon B. Johnson Space Center, converted their lunar module into a lifeboat. Their emergency activation and operation of the lunar module systems conserved both electrical power and water in sufficient supply to assure their safe return to Earth.

Haise was the backup lunar module pilot for the Apollo 8 and 11 missions and the backup spacecraft commander for the Apollo 16 mission.

From April 1973 to January 1976, Haise was the technical assistant to the manager of the Space Shuttle Orbiter Project. He was commander of one of the two two-man crews which piloted the Space Shuttle Enterprise on approach and landing test flights from June through October 1977. He was named in March 1978 to command one of the early Space Shuttle orbital flights.

Wind tunnel contract awarded

Bostrom-Bergen Metal Products, Oakland, Calif., has been awarded a $10.7 million NASA contract for construction work in connection with modifications of the largest wind tunnel facility in the western world.

The improvements in the 12-by-24-meter (40-by-80-foot) wind tunnel at Ames will significantly enhance national capability for research and development of new aircraft types, especially large helicopters and vertical and short take-off and landing aircraft.

Bostrom-Bergen was the successful bidder for work which includes structural modifications to accommodate an increase in the wind tunnel's drive power from 36,000 to 135,000 horsepower and a new test leg with a much larger test section 24 m high by 36 m wide (80 by 120 ft.).

The modified facility with its two test sections powered by the common drive sytsem is scheduled to be ready for operation in late 1981.

The new larger test section will be capable of speeds up to 190 kilometers per hour (115 miles per hour) and the increased horsepower of the new drive system will increase test speeds in the existing test section from 370 km/hr (230 mph) to 565 km/hr (345 mph).

The facility is the largest in the Ames wind tunnel complex. Since its completion in 1944, it has made important contributions in the development of vertical take-off and landing concepts, powered lift concepts, rotary-wing concepts and many military and civil conventional take-off and landing aircraft.

Although the increase in drive power is significant, extensive efforts have been made in the design of the new facility to reduce noise to levels below that generated by the present system.

Lunar Landing

(Continued from Page 1)

The Moon as the ultimate destination was not a sudden decision. Elements of the Apollo program had been put in motion even before the successful Mercury flights had begun. With the President's mandate, it was official. The space agency was pledged and the clock began running toward 1969.

With its sights on the Moon, NASA had settled on the concept of a lunar rendezvous as the best way of getting there and back. The master plan was to detach a small manned spacecraft from a command craft, make the lunar landing, and then catch up and dock with the mother ship in orbit. To perfect manned operations in space, the Gemini program was created. The Gemini missions, with a two-man crew, showed that astronauts could leave their confined, instrument-crammed positions and perform extravehicular activity, including walking in space. Gemini also proved that flights of several days duration caused no serious medical problems. And the critical techniques of flight management were refined and perfected in Mission Control, building for the complexities of Apollo.

Through the mid-1960s, the disparate parts of a gigantic technical undertaking came together, a meld of structures and sprawling facilities, machines and tiny, miniaturized instruments. Buildings went up that were major engineering feats in themselves.

Industry and universities joined hands with government and the military; contractors made components; scheduling led to shipping; a center at a domestic site complemented a space antenna overseas. All the hardware and communications had to synthesize as the decade waned.

Just before Christmas 1968, Apollo 8 headed for the Moon. Astronauts Borman, Lovell and Anders became the first humans to leave the Earth and enter the gravitational control of another solar body. Captured in a lunar orbit, they were the first to see the unknown back of the Moon and to track its lonely wasteland. Apollo 8 came home to ecstatic receptions and the last year of the 1960s had arrived.

By July 1969, the Apollo program had accelerated to the point where NASA was prepared for the first formal attempt to land men on the Moon. The conclusive push came from the performances of Apollo 9 and 10. The two missions, in March and May, had verified in space the command and service modules and the lunar module. Astronauts and equipment had gone through all phases of a collective dress rehearsal. They had done everything but touch down on the lunar crust.

When Apollo 10 floated down to the Pacific on May 26, the huge Saturn V rocket designated to launch the Apollo 11 spacecraft already was in position on Pad 39-A at the Kennedy Space Center. A countdown found all systems favorable and ended on the eve of the 4th of July. The next launch window was dependent on light conditions at the planned landing site, the Moon's Sea of Tranquillity, and the window would open at 9:32 a.m. EDT on July 16. The commitment was made to launch then.

The commander of Apollo 11, Neil Armstrong, described that morning:

"All was ready. Everything had been done. Projects Mercury and Gemini. Seven years of Project Apollo. The work of more than 300,000 Americans. Six previous unmanned and manned Apollo flights. Planning, testing, analyzing, training. The time had come.

"We had a great deal of confidence. We had confidence in our hardware: The Saturn rocket, the command module and the lunar module. All flight segments had been flown on the earlier Apollo flights with the exception of the descent to and the ascent from the Moon's surface and, of course, the exploration work on the surface. These portions were far from trivial, however, and we had concentrated our training on them.

"Months of simulation with our colleagues in the Mission Control Center had convinced us that they were ready.

"Although confident, we were certainly not overconfident. In research and in exploration, the unexpected is always expected. We were not overly concerned with our safety, but we would not be surprised if a malfunction or an unforeseen occurrence prevented a successful lunar landing.

"As we ascended in the elevator to the top of the Saturn on the morning of July 16, 1969, we knew that hundreds of thousands of Americans had given their best effort to give us this chance. Now it was time for us to give our best."

Apollo 11 lifted off in a classic launch, precisely on time. Eleven minutes later, Armstrong and his crew of Edwin E. Aldrin and Michael Collins were in Earth orbit. In less than three hours, the Saturn was fired and the preprogrammed escape from Earth completed; they were on their way to the Moon.

On the fifth day of the mission, their spacecraft circling the Moon at 60 miles altitude, Armstrong and Aldrin entered the lunar module Eagle and separated from the command module Columbia, leaving Collins alone in orbit. It was July 20.

The descent, controlled by engine burns, took the astronauts to the surface in two and one half hours. At 4:18 p.m. EDT, Neil Armstrong broke the tension: "Houston, Tranquillity Base here, the Eagle has landed."

After hours of checkoff, Armstrong squeezed through the module's hatch and moved slowly down the 10-foot ladder. At 10:56 p.m. he said, "That's one small step for a man, one giant leap for mankind." Neil A. Armstrong, 38, of Wapakoneta, Ohio, stood on another planet.

Armstrong set up a television camera and examined the fine-grained soil beneath his feet. Less than 15 minutes later, Buzz Aldrin followed him to the surface. Hundreds of millions of people saw the two astronauts in their bulky suits as they plodded around the grey surface, performing their assigned tasks. The next day, with their scientific experiments deployed and rock samples collected, Armstrong and Aldrin blasted off to rendezvous with the command ship in orbit. Just before docking, as he watched the Eagle's approach, Mike Collins remembered thinking, "for the first time on this incredible flight I feel it is going to happen . . . we are a long way from home but from here on it should all be downhill . . . we are really going to carry this off."

The aircraft carrier Hornet, with recovery helicopters and divers, was waiting southwest of Hawaii. On the afternoon of July 24, Apollo 11 splashed down in the South Pacific. Over one-fifth of the world's population had watched the Moon landing sequence, at least one half of the world knew about it. Excitement was worldwide for an event in the saga of mankind that seemed to transcend nationality. But for Americans, Apollo 11 also left a feeling of renewal in the national spirit. Years of war, assassination and domestic chaos could not diminish the shining moment. It was a good end to a bad decade.

In the ensuing 10 years, NASA has built upon the epoch of Apollo 11 with its affirmation of American vision and competence. Subsequent lunar landings, then the close of the Apollo program and reduced budgets only turned the agency to new directions. The manned flights of Skylab and Apollo Soyuz were followed by the exploration of Mars, the Venus probes and other planetary investigations. Parallel advances in the satellite system brought expanded and cheaper world communications, astronomical discoveries, remote sensing techniques with the potential of managing world resources. All of these projects signified the permanent status of man in the space environment. They contributed to the next evolutionary step – the Space Shuttle.

In the 1980s, the Shuttle will operate as the common carrier of space transportation. Spacecraft and launch equipment are returnable and reusable. The multiple payloads in the cargo bay can be placed where wanted and picked up or repaired in orbit. Besides scientific experiments, the Shuttle will allow for manufacture and in time, may precipitate structures in space. New programs are certain to grow from the routine findings of others.

Of all the Shuttle aspects, the human progression may be the most remarkable. Peoples of the world are going to be accommodated and made to feel at home in space, not just astronauts and cosmonauts, but medial beings, willing to leave their planet for brief or extended periods.

The missions that came after Apollo proved that humans can live comfortably and work productively in space for long spans of time. And in all historical and scientific narratives, and in the annals of courage, July 20, 1969, will defer to the few who were first.

Women's Advisory Group

AC79-0345-1

Ms. Janie Kendrick, a Financial Resources Specialist in the Work Management Office (RSTO) of the Facilities Services Branch, was recently elected chairperson of the Women's Advisory Group at Ames. Ms. Kendrick assumed the duties of the office from outgoing chairperson Susan Norman. Under her leadership, the Women's Advisory Group has already sponsored the Secretaries Luncheon in April and a recent lunch-time film showing about the women Space Shuttle astronauts. Future activities planned for the coming year include a showing of the film "How We Got the Vote" on Women's Equality Day in August, as well as various guest speakers, research projects, and brown bag film showings.

"Thank you"

Once again I'd like to thank all my friends who attended my retirement luncheon. It was great seeing everyone after being away for four months. A special thanks to "Alby" Silva, Sue Allen, Laurie and Richard Lee for their extra effort. The Craftsman Routes is a great gift and I expect to get a lot of use from it.

Thank you all –

Bill Carpenter

Stanford-NASA-ASEE Seminars

The Department of Aeronautics and Astronautics at Stanford University is sponsoring the 16th Annual Stanford-NASA-ASEE Aerospace Technology Seminars. All seminars will begin at 8 p.m. and will be held in the Skilling Building, Room 080, (Auditorium) on the Stanford campus. The seminar schedule is as follows:

July 11 RICHARD S. SHEVELL, Professor of Aeronautics and Astronautics, Stanford University, *"Gaining Perspective on the DC-10 Airplane"*

July 18 WOLFGANG K. H. PANOFSKY, Professor and Director, Stanford Linear Accelerator Center, *"Counting the Basic Particles of Physics – Again"*

July 25 JOHN L. EMMETT, Associate Director for Lasers, Lawrence Livermore Laboratory, *"Inertial Confinement Fusion: The Technological Challenge and Payoff for Success"*

August 1 PERRY L. McCARTY, Silas H. Palmer Professor of Civil Engineering, Stanford University, *"The Role of Water Re-use in Water Resource Conservation"*

August 8 IRWIN REMSON, Professor and Chairman of Applied Earth Sciences, Stanford University, *"A Look at Nuclear Waste Disposal"*

Golf

The place: Beautiful but treacherous Laguna Seca on June 9. The starting time was early – 9 a.m. It was the first day of match play. The temperatures were soaring. There were 60 players (extremely large group for out of town). And wouldn't you just know the bus would be late with 30 of the players? But co-chairmen Roger Hedlund and Dean Jaynes took it all in stride and ran a smooth and fun tournament. Nice going!

Hedlund was in command out on the course, too. He shot the best scratch round of the day – a 75. In close pursuit were Ritter, 76, and Ramos and Odneal at 77's. What can you say? Odneal also had the day's best net – a 66!

Based on a point-par system of scoring, these are the winners:

First Flight:	1 – Odneal	2 – Ritter
	3 – Ramos	4 – Mathews, Hedlund
Second Flight:	1 – DeWitt	2 – Oyama, D. Dust
	4 – P. Quattrone	5 – Radovich
Third Flight:	1 – Macon	2 – Joly
	3 – M. Smith, Scott, Richardson	
Fourth Flight:	1 – Pogue	2 – G. Rathert
	3 – I. Rathert, Harry, J. Levin	

The bus proved to be, not only a good move towards beating the gas crunch, but also provided a few thrills. And the refreshments on the return trip certainly added a nice finishing touch to an eventful day – thanks Earl and Dean. Also, let us not forget to thank Earl Menefee for his role in securing the bus. Why don't we try it again? See you at Aptos!

NASA SPECIAL PUBLICATIONS

National Aeronautics and Space Administration

The following NASA Special Publications are now on display in the Ames Main Library and the ARA Store. Following your review of these new releases, if you would like a retention copy for your files, return a completed NASA Special Publication Request Form, ARC 303, for each publication you desire to the Main Library, M/S 202-3, and *a copy will be mailed* to you. Please allow 2 weeks for processing and distribution of your request. Because the number of copies of NASA Special Publications available to the Center is limited, requests will be processed as they are received until the supply is exhausted and distribution will be limited to Ames Research Center Civil Service employees.

NASA SP-399 SKYLAB: EREP INVESTIGATIONS SUMMARY
Prepared by NASA Lyndon B. Johnson Space Center

Findings derived from the Earth Resources Experiment Package (EREP) – carried into space in 1973 aboard Skylab, the largest manned space station ever put in low-Earth orbit – are presented in this summary of the work of 148 investigators assigned to 164 project tasks. From May 1973 to February 1974, Skylab was occupied by three crews for a total of 171 days. EREP sensors, which operated at infrared, visible, and microwave wavelengths, provided thousands of photographs and miles of magnetic tape recordings of surface features of selected regions of five continents and two oceans between lat. 50°N and lat. 50°S. Observations were made of the Sun, stars, near-Earth space, and the functioning of living organisms in a weightless environment, and studies were made of materials and manufacturing processes in the space environment. These program summaries cover land use and cartography; agriculture, range, and forestry; geology and hydrology; oceans and atmospheres; and data analyses. Other program-related information – descriptions of systems, principles of the data analyses, and a list of principal investigators – is provided in appendixes. More than 150 photographs, most in color, supplement the text. Hardbound, oversize format, 386 pages.

NASA SP-402 A NEW SUN – The Solar Results From Skylab
By John A. Eddy

A written and pictorial account of the Skylab-borne Apollo Telescope Mount (ATM) – the first full-scale, manned astronomical observatory in space – is presented in terms of the history of solar observations, mission programs, and ATM contributions to man's knowledge of the Sun. The final Skylab mission, focus of the book, was launched in November 1973 and set an endurance record for manned space flight of 84 days. The solar telescope array called ATM comprised eight principal solar telescopes, the most advanced instruments ever put in operation. With them, the Sun could be viewed and studied, with a pointing accuracy and steadiness equal to those of a ground-based observatory, at wavelengths invisible from Earth. The results are an important addition to solar astrophysics. For example, sensors watched the corona, visible from Earth for only moments during total eclipse, nearly continuously for 9 months. The mission was characterized by the quality, sensitivity, and reliability of its instrumentation; the flexibility of the experimental programs; and the capabilities of the astronauts and a ground-support team that was in constant contact with solar astronomers throughout the world. Copiously illustrated, most photographs in color; hardbound, 198 pages.

NASA SP-426 SUN, WEATHER, AND CLIMATE
John R. Herman and Richard A. Goldberg

The general subject of the relationships that exist between events on the Sun and the climates and weather on Earth is introduced. Written for researchers active in the atmospheric and space sciences, the book reviews reported correlations between solar activity and climate and weather and discusses probable coupling mechanisms. Suggestions for theoretical and experimental research to identify and study unknown causal relationships are included. Subject areas addressed comprise solar-related correlation factors and energy sources; long-term and short-term meteorological correlations; physical processes and mechanisms; and guidelines for experiments. Physical properties of the atmosphere; conversion factors; and abbreviations, indices, symbol definitions, and units of measure are included. A comprehensive reference list and author and subject indexes are provided. Softbound, 360 pages.

NASA SP-4404 LIQUID HYDROGEN AS A PROPULSION FUEL, 1945-1959
John L. Sloop

A comprehensive history of man's interest in hydrogen as a propulsive fuel and of the development of hydrogen technology from 1945, when the first systematic investigations of liquid hydrogen as a propellant for aircraft and rockets was begun in the United States, to 1959, when decisions were made to use it in the Centaur and Saturn vehicles, is presented. The decision to use liquid hydrogen in the upper stage of the Saturn vehicle proved instrumental to the success of the Apollo Moon missions of the 1960's and 1970's. The history is presented in three principal parts: (1) analytical and design studies and experimentation between 1945 and 1950; (2) technological advances in the 1950-1957 period in the use of hydrogen fuel for rockets and aircraft; and (3) the years 1958 and 1959 during which the United States started development of a 6.7-meganewton rocket engine (10 times larger than any engine of that time) and the planning and development work that led to Saturn I. Information on the history of hydrogen through the nineteenth century, rocket pioneers, hydrogen technology from 1900 to 1945, hydrogen as a rocket fuel, and a propulsion primer and engine performance parameters are provided in appendixes. Extensive source notes and an annotated bibliography are included. Softbound, illustrated, 325 pages.

Ames Promotion Plan vacancies

Notice No.	Title	Grade	Org.	Area of Consideration	Closing Date
79-103	AST, Technical Management	GS-13/14	FD	Ames/Outside	07-23-79
79-104	Secretary (Typing)	GS-4/5	RKT	Ames/Outside	07-11-79
79-105	Payroll Clerk	GS-3/4/5	AFP	Ames/Outside	07-11-79
79-106	Visual Information Specialist	GS-11/12	ATG	Ames employees only	07-13-79
79-107	Supv. Aerospace Engineer	GS-14	FVO	Division-wide	07-13-79
79-108	Aircraft Mechanic	WG-8/10/11	FOS	Ames/Outside	07-13-79
79-109	Chief, Computer Technology Branch (Temp. NTE 1 Year) (Temporary NTE 1 Year)	GS-13/14	RKT	NASA-Ames/ Army/Tenant Agencies	07-16-79
79-110	Computer Systems Analyst	GS-11/12	RKM	NASA-Ames/ Army/Tenant Agencies	07-16-79

TO APPLY: Complete ARC 59 and submit to Mail Stop 241-6.

ARMY VACANCIES

Y-13-79	Aerospace Engineer	GS-12	Aeromech. Lab, Fluid Mech Div.	NASA-Ames/ Army/Tenant Agencies	07-06-79
Y-14-79	Visual Information Specialist	GS-5/7/9	Aeromech. Lab., Support Div.	NASA-Ames/ Army/Tenant Agencies	07-06-79

TO APPLY: Complete APM 62 and submit to Mail Stop 241-6.

MERIT PROMOTION PLAN SELECTIONS

Notice No.	Title	Org.	Name
79-66	Research Aircraft Inspector	FOI	Gerard Bree
79-86	Lead Travel Clerk	AFP	Maria Cruz
79-88	Secretary (Typing)	RK	Karen Inches
79-89	Electronics Technician	FOS	Lonnie Phillips

Want ads

Transportation

For Sale: '69 Chrysler Newport 4-dr, good cond., new battery, tires and seat covers. P/S, $600. Phone 967-5894.

'67 Pontiac Bonneville, V-8, PS, PB, PW, new tires, large trunk, $300. Call 968-3307 evenings.

For Sale: '65 Mustang, exc. cond. $3800 or best offer. 948-9072.

Housing

Share a beautiful house in Los Altos, 6 miles from Ames. $210 mo., 948-9072 after 5.

For Rent: Completely furnished one-bedroom apartment, from July 10 to October 10. Area of Winchester and Hwy. 280. Price $300 per month. 246-0517.

Room or apartment needed for visiting professor from July 9 to August 3, 1979. Contact David Black at ext. 5495.

Apartment/House Share Wanted: Immediately – end of August by student from Cambridge, England, working at Ames. Please contact Kathy Sun, 5574.

Miscellaneous

Sheltie puppies: 2 litters due in July and August. Championship bloodlines. AKC registered. Reservations being taken. 996-7009.

I found a blue bag with leather bottom near building 213 on King Rd. Call Bob Gin at ext. 6318.

Ladies red jacket with hood, size 12, left in lecture hall during tour June 14, 9:30. Please pick up, or call: 416-6497.

Old newspapers available in Public Affairs for paper drives. Call 5091.

Carpool: Would like to form one from Santa Teresa area (South San Jose). Bob McCracken, ext. 5664.

Forming a Vanpool from Scotts Valley area, 7:30 to 4:00 shift. Floyd Wiens, ext. 5984, or 335-7714.

Vanpool

As Driver/Coordinator I am organizing a vanpool from the east foothills of San Jose to NASA/Ames with "Rides" for Bay Area Commuters Inc. My latest survey shows that there are more people interested in the 8:00 a.m. to 4:30 p.m. shift from areas extending from Alum Rock area to Milpitas.

The proposed route would commence at Alum Rock Ave. and Miguelita Ave., to Mckee Rd., Toyon, Penitencia Creek Rd., Piedmont Rd., Sierra Rd., Morrill Ave., Park Victoria Dr., Calaveras Blvd., Weller and Main, Hwy. 237 to NASA/Ames. Rider pick-up and drop offs will be made at any point on proposed route.

The only obligation for a rider is that the fare be paid a month in advance. Example: for month of Aug., due by July 31.

A rider can terminate their vanpooling at any time. "Rides" suggests that a 30-day notice of termination be given to Driver/Coordinator so he can pick up another vanpool rider.

Any individual leave time used during any given month will not be prorated by "Rides Inc."

Any interested persons living on or near this proposed route please call Fred R. Lemos. Phone: 965 ext. 5463.

Extimated monthly fares: Fourteen riders $33.50 each.

Deluxe van, fully equipped, new B300 Dodge Royal Sportsman Maxiwagon, 15 passenger. Fare includes lease, insurance, maintenance, and gasoline.

Check a San Jose map for proposed route which may be in your area.

ARA ACTIVITIES

NOTICE to all ARA CLUBS: Your budget requests for the period October 1, 1979 through September 30, 1980 should be sent to Stan Benbow or Paulette Burgess no later than July 1, 1979 so that the AMES RECREATION ASSOCIATION Board Members can work out a budget for this coming year.

The Astrogram

Admin. Mgt. Building, Phone 965-5422

The Astrogram is an official publication of the Ames Research Center, National Aeronautics and Space Administration, Moffett Field, California, and is published bi-weekly in the interest of Ames employees.

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CALENDAR OF EVENTS

(POST ON BULLETIN BOARD OR MAIL TO INTERESTED PERSONS)

PREPARED BY:
VISITS COORDINATOR
965-5546 M.S. 253-1

Jul 9 –	Jul 10 – Tuesday noon at the movies Time 11:40 a.m. Location: N-201, Main Auditorium	Jul 11 – Flight Systems Research Division Seminar Speaker: Professor A. S. Willsky, Laboratory for Information and Decision Systems, M.I.T. Topic: Abrupt changes in signals and Systems Time: 10:00 a.m. Location: N-210, Room 205 Ames Stamp Club Meeting Time: 7:30 p.m. Location: N-241, Room 237	Jul 12 – Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	Jul 13 –
Jul 16 –	Jul 17 – Tuesday noon at the movies Time: 11:40 a.m. Location: N-201, Main Auditorium	Jul 18 – Extraterrestrial Research Division Seminar Speaker: Dr. Robert Langridge, Computer Graphics Laboratory, School of Pharmacy, Univ. of Calif., San Francisco, CA Topic: The Use of Computer Graphics in Investigating Molecular Interactions Time: 3:00 p.m. Location: N-239, Room 361 National Federation of Federal Employees (NFFE) monthly meeting Time: 12:00 – 12:30 p.m. Location: N-213, Room 261	Jul 19 – Computational Fluid Dynamics Branch Seminar Speaker: Dr. Nobuhiko Kamiya, National Aerospace Laboratory, Tokyo, Japan Topic: Research on Numerical Calculation of Transonic Flow at the National Aerospace Laboratory Time: 9:30 a.m. Location: N-233, Room 227 Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, Ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	Jul 20 –
Jul 23 – Chemical Research Projects Office Seminar Speaker: Dr. Dieter O. Hummel, Univ. of Cologne, Germany Topic: Combination of Infrared Spectroscopy with Pyro-Field Ionization Mass Spectrometry for the Identification of Complex Polymeric Materials Time: 10:00 a.m. Location: N-223, Room 100	Jul 24 – Computational Fluid Dynamics Branch Seminar Speaker: Dr. Joel C. W. Rogers, Applied Physics Laboratory, The Johns Hopkins University Topic: Incompressible Flows as a System of Conservation Laws with a Constraint Time: 3:00 p.m. Location: N-233, Room 227	Jul 25 – Ames Photo Club monthly meeting Time: 4:45 p.m. Location: N-245, Auditorium	Jul 26 – Bible Study for Ames and Navy people Coordinator: Dr. Dewey Hodges, ext. 5835 Time: 12:00 noon Location: Bldg. 48, Navy side (Sunday School Building)	Jul 27 – If you wish to have an event announced on this calendar please notify Linda Mackey, Visits Coordinator, ext. 5546, M/S 253-1. The next calendar will cover the period July 23 – August 10. The deadline is July 3.

WEEKEND ACTIVITIES:

Jul 28 –
ARC Golf Tournament
Santa Teresa Golf Course
Time: 11:00 a.m.
Co-Chairmen: Fred Johnson and Les Collins
Send money by July 13 to Dave Banducci, M/S 226-3.

ARA STORE HOURS: 12:00 - 12:45 TUESDAY & THURSDAY
LOCATED IN N-235 AMES CAFETERIA
NASA-AMES TOUR OFFICE - 965-6497

JULY 3, THRU JULY 9, 1979

A LA CARTE MENU

TUESDAY
Chicken Cacciatore.....
Baked Corned Beef Hash and Poached Egg.....
Choice of One: Whipped, Parmesan Potatoes, Steamed Cabbage, Corn O'Brien or Salad
Soup - Cream of Spinach or French Onion.....

WEDNESDAY - FOURTH OF JULY

THURSDAY
Baked Ham and Turkey Surpreme Sauce.....
Turkey A La King on Biscuit.....
Choice of One: Mashed Potatoes, Candied Yams, Buttered Corn, Green Beans or Salad
Soup - Philadelphia Pepper Pot.....

Friday
English Fried Sole Almondine .....
Turkey Cream Cheese & Macaroni Casserole.....
Choice of One: Whipped, German Fried Potatoes, Buttered Celery, Cauliflower Au Gratin or Salad
Soup - Seafood Gumbo.....

MONDAY
Sauerbraten and Potato Pancake.....
Boiled Beans and Diced Ham.....
Choice of One: Snowflaked, Hot Potato Salad, Buttered Carrots, Beans Almondine or Salad
Soup - Chicken Broth & Rice.....

DAILY SPECIALS
INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A .30¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

DAILY DIET SPECIAL

(Chef's Choice) - Vegetarian Plate: 3 Vegetables, 1 Jello or Cottage Cheese or Poached Egg.....

* * * * * * * * * * * * * * * * * *

JULY 10, THRU JULY 16, 1979

A LA CARTE MENU

Baked Chicken with Dressing.....
Spaghetti and Meat Balls.....
Choice of One: Whipped Potatoes, Rice Pilaf, Mixed Vegetables, Buttered Hominy or Salad
Soup - Scotch Barley (Lamb & Vegetables).....

Yankee Pot Roast and Potato Pancake.....
Spaghetti and Ravioli.....
Choice of One: Mashed, Country Fried Potatoes, Zucchini & Tomatoes, Mixed Beans or Salad
Soup - Cream of Broccoli.....

Sauted Pork Chop over Rice.....
Beef Paprikash over Noodles.....
Choice of One: Snowflaked Potatoes, Yams, Beans & Mushrooms, Creamed Spinach or Salad
Soup - Chicken Broth and Rice.....

Shrimp Creole and Rice.....
Zucchini and Beef Casserole.....
Choice of One: Whipped, Baked Potatoes, Green Beans, Cauliflower Au Gratin or Salad
Soup - Fulton's Market Clam Chowder.....

Home Style Beef Stew.....
Turkey Pot Pie Pastry Crust.....
Choice of One: Snowflaked Potatoes, Rice Pilaf, Butter Peas, Glazed Carrots or Salad
Soup - Fresh Vegetable with Spaghetti.....

INCLUDES: A $1.40 ENTREE, VEGETABLE OR POTATO, SALAD ROLL & BUTTER, AND A .30¢ BEVERAGE.....

(CHEF'S CHOICE) HOT SANDWICH AND LARGE BOWL OF SOUP...

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Space Administration

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